```
Database :
                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                   ptal number of hits satisfying chosen parameters:
  GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                    1472140 seqs, 8248589755 residues
                                                                                                                                                                                                                                                                                                                                                                                                                    IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                          November 28, 2001, 23:48:11; Search time 1789.67 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                            gb_om:*
gb_ov:*
gb_pat:*
gb_ph:*
gb_pl:*
                                                                                                                                                                                                                                                                               gb_ba:*
gb_htg:*
gb_in:*
em_htgo_hum:*
em_htgo_inv:*
em_htgo_rod:*
em_htg_inv:*
em_htg_inv:*
em_htg_rod:*
                                                          em_pat:*
em_ph:*
em_pl:*
em_ro:*
em_rs:*
em_sts:*
em_un:*
em_un:*
                                                                                                                            gb_sts:*
gb_un:*
gb_vi:*
gb_vi:*
em_ba:*
em_fun:*
em_in:*
em_on:*
em_or:*
                                                                                                                                                                                                                       gb_ro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (without alignments)
6231.369 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                    2944280
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	C C C C C C C C C C C C C C C C C C C	Result
		Query
	Length Le	•
ALIGNMENTS-	AX179789 AF321127 AF321127 AF321127 AF321127 AF321127 AF321127 AF321127 AF321127 AF321127 AF3219787 AX179787 AX179787 AC027787 AC027787 AC027787 AC090401 AF003127 AP003127 AP003127 AP003127 AP003127 AP003127 AP0031302 AF327912 AF337913 AF337913 AF337913 AF337913 AF337913 AF337915 AF337915 AF337915 AF337915 AF337916 AF337917 AF237910 AF337917 AF237910 AF337917 AF237910 AF337917 AF237910 AF337917 AF2379110 AF337917 AF2379110 AF337917 AF2379110 AF3379110 AF337910 AF3379110 A	
	AX179789 Sequence AF237907 Homo sapi AF321127 Homo sapi AF321127 Homo sapi AF321127 Homo sapi AB013103 Homo sapi AB013103 Homo sapi AX179781 Sequence AX179785 Sequence AX179787 Sequence AX179787 Sequence AX179788 Sequence AX179788 Homo sapi AC027787 Homo sapi AP001034 Homo sapi AP001034 Homo sapi AP001034 Homo sapi AP001034 Homo sapi AF068288 Homo sapi AF068288 Homo sapi AF068281 Homo sapi AF068281 Homo sapi AF037912 Homo sapi AF037912 Homo sapi AF237912 Homo sapi AF237914 Sequence AF367473 Homo sapi AX101306 Sequence AF237910 Mus muscu AF237910 Mus muscu AF237910 Mus muscu AF237917 Homo sapi AX101306 Sequence 19 X12530 Human mRNA I07272 Sequence 2 AF237914 Mus muscu AF237914 Mus muscu AF237914 Mus muscu AF237914 Mus muscu AF21240 Homo sapi AF286666 Homo sapi AF286666 Homo sapi AF21240 Homo sapi	

	source	FEATURES		JOURNAL		TITLE	AUTHORS	REFERENCE			ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	LOCUS	AX179789	RESULT 1
/organism≈"Homo sapiens"	rce 1676	Location/Qualifiers	Lexicon Genetics Incorporated (US)	L Patent: WO 0146417-A 9 28-JUN-2001;	having homology to cd20 proteins and ige receptors	Human membrane proteins and polynucleotides encoding the same	S Walke, D.W. and Turner, C.A.		Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	SM Homo sapiens	human.		AX179789.1 GI:15132148	N AX179789	ON Sequence 9 from Patent WO0146417.	AX179789 676 bp DNA PAT 06-AUG-2001		F

```
KEYWORDS
SOURCE
ORGANISM
                                                                                                   RESULT
AF237907
                                                                                                                                               Ş
                                                                                                                                                               Ъ
                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                 δĀ
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                             Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                          .Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                                                  밁
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                         REFERENCE
                                                                     VERSION
                                                                              ACCESSION
                                                                                    DEFINITION
         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Ma
Best Loc
Matches
                                                                                                                                   661
                                                                                                                                                661
                                                                                                                                                                601
                                                                                                                                                                              601
                                                                                                                                                                                             541
                                                                                                                                                                                                             541
                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        y Match
: Local Sim
:hes 676;
                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                 ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                                                                                                                                                                        CCACGACCTTTTCAACTCAAAGCCCCTTGCAAAAATTATTTGCTAGAAAAATGAAAATCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                                                                                                                                                                                                                                                                                              cagaaactctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatag
                                                                                                                                                                                                                                                                                                                            ggggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaacca
                                                                                                                                                                                                                                                                                                                                                                                                                                           tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag
                                                                                                                                                                                                                                                                                       CAGAAACTCTGATAATATTGAGCCGAATAATGAATCTTCTTAGTGCCCTGAGAGCAATAG
                                                                                                                                                                                                                                                                                                                     GGGGCTCTGTTTTGTTCATTAATTCTGGAGCCTTCCTAATTGCAGTGAAAAGAAAAACCA
Eukaryota; Metazoa; Chordi
Mammalia; Eutheria; Prima'
1 (bases 1 to 694)
Liang, Y. and Tedder, T.F.
Identification of a cd20-
family: sixteen new ms4a
                                                                    AF237907
Homo sapiens l
AF237907
AF237907.1 G:
                                     Homo sapiens
Eukaryota; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:9606"
a 140 c 112 g
                                                                      GI:13649400
                                                                                    MS4A5
                                                                                                                                  676
                                                                                                                                                676
                                                                                           ďď
                               Chordata;
Primates;
                                                                                    protein
cd20-, fcepsilonribeta-,
ms4a family members expr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 676; DB 6;
Pred. No. 9.5e-148;
; Mismatches 0;
                                                                            mRNA
'n mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                              Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                    complete
 expressed
                                                                                    cds
                                Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
        and
htm4-related
d in human and
                                                                                            17-APR-2001
                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                              660
                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                660
                                                                                                                                                                                             600
                                                                                                                                                                                                           600
                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
        gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
REFERENCE
AUTHORS
TITLE
JOURNAL
                 Qy
                                      ġ
                                                 Qy
                                                                   В
                                                                                Qy
                                                                                                 В
                                                                                                             QY
                                                                                                                                B
                                                                                                                                             Qy
                                                                                                                                                             B
                                                                                                                                                                           δÃ
                                                                                                                                                                                            뫄
                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                        BASE CO
        밁
                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 669
                                                                                                                                                                                                                                                                                                                                                                                               COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
        623
                      601
                                      563
                                                    541
                                                                    503
                                                                                   481
                                                                                                 443
                                                                                                                 421
                                                                                                                                 383
                                                                                                                                                              323
                                                                                                                                               361
                                                                                                                                                                            301
                                                                                                                                                                                            263
                                                                                                                                                                                                           241
                                                                                                                                                                                                                           203
                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                        143
                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                   μ.
      ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                         ctggaatcattctcctcacatttggtttcatcctagatcaaaactacatttgtggttatt
                                                                                                                               cagaaactotgataatattgagoogaataatgaatottottagtgoootgagagoaatag
                                                                                                                                                             ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct 180
                                                                                                                                                                                                                                                                                                                   CTGGAATCATTCTCCTCACATTTGGTTTCATCCTAGATCAAAACTACATTTGTGGTTATT
                                                                                                                                                                                                                                                                                              tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
                                                                                                                                                                                                                                                                                      TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mouse
Genomics
21295030
                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                198
                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                               ۵
```

```
Direct Submission
Submitted (24-FEB-2000) Immunology,
Dr., Durham, NC 27710, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                           2 (bases 1 to 694)
Liang, Y. and Tedder, T.
                                                                                                                                                                                                                                                     /db_xref="taxon:9606"
55..657
/codon_start=1
/product ".
                                                                                                            Product="M4A5 protein"
| protein_id="A6K37416.1"
| protein_id="A6K37416.1"
| /db_xref="Gi:13649401"
| /translation="MDSSTAHSPVFLVFPPEITASEYESTELSATTFSTQSPLQKLFA
| KRMKILGTIQILFGIMITSFGVIFLFILLKPVPRFPFIFLSGVPFWGSVLFINSGAFL
| IAVKRKTTETLLILSRIMNELSALGAIAGAILLLTFGFILDQNVICGYSHQNSQCKAVT
| VLFLGILITLMTFSIIELFISLPFSILGCHSEDCDCEQCC"
| a 143 c 116 g 237 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72 (2),
                                                                                                                                                                                                                                                                                                                                             1. .694
                98.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119-127
Score 667.2; DB 9;
Pred. No. 1.1e-145;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                               .
IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (2001)
                                                                                                                                                                                                                                                                                                                                                                                                       Duke
                                                                                                                                                                                                                                                                                                                                                                                                       Medical
                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                     Center,
```

0;

Indels

0,

0,

142

420

382

600

540

502

480 442

480

504

444

384 360 324

```
δõ
                                                                          B
                                                                                                        Ş
                                                                                                                                       밁
                                                                                                                                                            Qy
                                                                                                                                                                                                D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
AF321127
LOCUS
                     В
                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                 SE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                     205
                                                 181
                                                                             145
                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                       85
                                                                                                                                                                   61
                                                                                                                                                                                                  25
                                                                                                                                                                                                                            Н
                                                                                                                                                                                            tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                    TAGGGACTATCCAGATCCTGTTTGGAATTATGACCTTTTCTTTTTGGAGTTATCTTCCTTT
                               tagggactatccagatcctgtttggaattatgaccttttctttttggagttatcttcctttt
                                                                         ttaaaataaaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTAAAATAAAAA
                                                                                                                                                                                                                                                        669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens complete cds. AF321127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
Submitted (14-NOV-2000) Division of Immunology and Cell Biology,
John Curtin School of Medical Research, Mills Road, Canberra, ACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 697)
Hulett,M.D., Pagler,E., Hornby,J.R., Hogarth,P.M., Eyre,H.J.,
Baker,E., Crawford,J., Sutherland,G.R., Ohms,S.J. and Parish,C.R.
Isolation, tissue distribution, and chromosomal localization of novel testis-specific human four-transmembrane gene related to C and PoepsilonRI-beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human .
Homo :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hulett, M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21092614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochem. Biophys. Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF321127.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF321127
                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 697)
                                                                                                                                                                                                                                                                                                                                                  199
                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Australia
                                                                                                                                                                                                                                                                                                                                              /translation="MDSSTAHSPVFLVFPPEITASEYESTELSATTFSTQSPLQKLFA RKMKILGTIQILFGIMTESFGVIFLFTLLKPVPRFPFIFLSGVPFWGSVLFINGGAFL IAVKRKTTETLIILSRIMMFLSALGAIAGIILLTFGFILDQNYICGYSHQNSQCKAVT VLLLGILITLMTFSIIELFISLFSFILGCHSEDCDCEQCC" 119 g 237 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="TETM4"
57. .659
                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start=1
/product="testis-expressed transmembrane-4
/protein_id="AAKO1641.1"
/db_xref="GI:12698682"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /map="11q12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="TETM4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:12698681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  testis-expressed transmembrane-4
                                                                                                                                                                                                                                                                      98.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                     Score 666.6; DB 9;
Pred. No. 1.5e-145;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Commun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      280 (1), 374-379 (2001)
                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                 Length 697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein (TETM4) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein"
                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                       Gaps
                                             240
                                                                                                                                                                                                                           60
                                                                                                                                                                                             84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     to CD20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ø
                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
AB013103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29
                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Snoor
                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
TITLE
                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                              CDS
                                                                          gene
                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttaaaataaaaaa 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tgatgactttcagcattattgaattattcatttctctgcctttctcaattttggggtgcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTAAAATAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTCAGAGGATTGTGATTGTGAACAATGTTGTTGACTAGCACTGTGAGAATAAAGATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       actcagaggattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGATGACTTTCAGCATTATTGAATTATTCATTTCTCTGCCTTTCTCAATTTTGGGGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCACCAAAATAGTCAGTGTAAGGCTGTTACTGTCCTGTTGTTGGGAATTTTGATTACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGAATCATTCTCCTCACATTTGGTTTCATCCTAGATCAAAACTACATTTGTGGTTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctggaatcattctcctcacatttggtttcatcctagatcaaaactacatttgtggttatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGAAACTCTGATAATATTGAGCCGAATAATGAATTTTCTTAGTGCCCTGGGAGCAATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cagaaactctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGGCTCTGTTTTGTTCATTAATTCTGGAGCCTTCCTAATTGCAGTGAAAAGAAAAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ggggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaacca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AB013103
Homo sapiens I
AB013103
                                                                                                                                                            Submitted (20-APR-1998) Kenichi Ishibashi, Tokyo Medical and Dental University, 2nd Internal Medicine; Yushima 1-5-45, Bunkyo, Tokyo 113-8519, Japan (E-mail:kishibashi.med2@med.tmd.ac.jp, Tel:81-3-5803-5223, Fax:81-3-5803-0132)
                                                                                                                                                                                                                                                                                                                                                                        Ishibashi, K., Suzuki, M., Sasaki, S. and Imai, M. Identification of a new multigene four-transmembrane family related to CD20, HTm4 and beta subunit of the high-affinity
                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                 Ishibashi,K., Sasaki, Cloning of three CD20
                                                                                                                                                                                                                                                                                                                              Gene 264 (1), 87-93 (2001)
21142397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AB013103.1 GI:11
MS4A5; CD20-like
                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                       Ishibashi,K
                                                                                                                                                                                                                                                                                                                                                             receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens testis cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                  (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                        (sites)
                                                                                                                                                                                                                                                        (bases
/gene="MS4A5"
/codon_start=1
/product="MS4A5"
                                           /gene="MS4A5"
52. .654
                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                       /tissue_type="testis"
                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                       1 to 691)
                                                                                                                                     .691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                 Sasaki,S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for MS4A5,
                                                                                                                                                                                                                                                                                   homolog
                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                 Marumo,F.
og from human,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complete
```

20-MAR-2001

684

600 564 540

putative

calcium

channels

(MS4A) IgE

```
RESULT 5
AX179781
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                      δÝ
                                                                                                                                                                                                                                                ) i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                              Qy
                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                      Ϋ́
                                                                                                                        В
                                                                                                                                      Qy
                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Ma
Best Loc
Matches
                                                                                                                                            661
                                                                                                                                                                                                         560
                                                                                                                                                                                                                                                 500
                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                       440
                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                620
                                                                                                                                                                                     601
                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                380
                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                       320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               y Match
Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                      ttaaaataaaaa
||||||||||
                                                                                                                                                              ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                                                                                                                                                                                                                 ctggaatcattctcctcacatttggtttcatcctagatcaaaactacatttgtggttatt
                                                                                                                                                                                                                                                                                                                                          cagaaactctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                tagggactatccagatcctgtttggaattatgaccttttctttttggagttatcttccttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag
                                                                                                                                                                                                                                               CTCACCAAAATAGTCAGTGTAAGGCTGTTACTGTCCTGTTCTTGGGAATTTTGATTACAT
                                                                                                                                                                                                                                                                                       CTGGAATCATTCTCCTCACATTTGGTTTCATCCTAGATCAAAACTACATTTGTGGTTATT
                                                                                                                                                                                                                                                                                                                                CAGAAACTCTGATAATATTGAGCCGAATAATGAATTTTCTTAGTGCCCTGGGAGCAATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCACGACCTTTTCAACTCAAAGCCCCTTGCAAAAATTATTTGCTAGAAAAATGAAAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG
                                      AX179781
Sequence 1
AX179781
AX179781.1
Eukaryota;
         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98.5%;
nilarity 99.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   195
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCCAGATCCTGTTTGGAATTATGACCTTTTCTTTTGGAGTTATCTTCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /protein_id="BAB18739.1"
/db_xref="GI:11559214"
/db_xref="GI:11559214"
/translation="MOSTAHSSYFLYFPPEITASEYESTELSATTFSTQSPLOKLFA
RKMKILGTIQILEGIMTESFGVIFLFTLLKPYPRFPFIFLSGYPFWGSYLFINSGAFL
IAVKRWTETLILLSRIMNFLSALGAIILLTFGFILDQNYICGYSHQNSQCKAVT
VLFLGILITLMFFSIFLELFISLFFSFLIGCHSEDCDCEQCC"

142 c 117 g 237 t
                                                          from
                                                                                                                                            672
Metazoa;
                                                         603 bp
om Patent
Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 665.6;
Pred. No. 2.5e
0; Mismatches
                                                             WO0146417
Craniata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; DB 9;
2.5e-145;
nes 4;
Vertebrata;
                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                     06-AUG-
Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                       379
                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                       499
                                                                                                                                                                                                                                                                                                                                439
                                                                                                                                                                                                                                                                                                                                                                                                             319
                                                                                                                                                                                                                                                                                                                                                                                                                                                     259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
RESULT 6
AX179787
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
       VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                     Ω
                                                                                                                                             Db
                                                                                                                                                              Ωy
                                                                                                                                                                                    Вρ
                                                                                                                                                                                                    Q
                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 603
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                           633
                                                                                                                                             541
                                                                                                                                                                 573
                                                                                                                                                                                                       513
                                                                                                                                                                                                                           421
                                                                                                        601
                                                                                                                                                                                    481
                                                                                                                                                                                                                                              453
                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                     393
                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                           333
                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                273
                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                      213
                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                           153
                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \mathfrak{S}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \mathbf{L}
                                                                                                                                            tetetgeettteteaattttggggtgeeacteagaggattgtgattgtgaacaatgttgt 632
                                                                                                                                                                                   TGA
                                                                                                                     tga
|||
                                                                                                                                                                                                                                                                          aatcttcttagtgccctgagagcaatagctggaatcattctcctcacattttggtttcatc
                                                                                                                                                                                                                                                                                                                ttcctaattgcagtgaaaagaaccacagaaactctgataatattgagccgaataatg
                                                                                                                                                                                                                                                                                                                                                                                                                                 aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 152
                                                                                                                                                                                                                                                                                                      TTCCTAATTGCAGTGAAAAGAAAAACCACAGAAACTCTGATAATATTGAGCCGAATAATG
                                                                                                                                                                                                                                                                                                                                                                                                                        AAATTATTTGCTAGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCCTTGCAA
                                                                                                                                                                                                                                                                AATCTTCTTAGTGCCCTGAGAGCAATAGCTGGAATCATTCTCCTCACATTTGGTTTCATC
                         AX179787
Sequence 7:
AX179787
AX179787.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Primates; Catarrhini; Ho
1 (bases 1 to 603)
Walke,D.W. and Turner,C.A.
Human membrane proteins and polynucleotides
having homology to cd20 proteins and ige rec
Patent: WO 0146417-A 1 28-JUN-2001;
Lexicon Genetics Incorporated (US)
Homo
       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                           635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89.2%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
125 c 104 g 21
                                              from
                           GI:15132147
                                              450 bp
om Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 603; DB 6;
Pred. No. 1e-130;
0; Mismatches 0;
                                               WO0146417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              603;
                                                        06-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                    452
                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                       180
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δδ
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                           γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                 FEATURES
                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                    LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                           ERSION
                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 354
                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                             393
                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                               333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTTT
                                                                                                                                                                                                                                                                                                                                                                                                 ttcctaattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                    tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAATTATTTGCTAGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatt
                                                                                                                                                                                                                                                                                                                                                            aatct 397
                                                                                                                                                                                                                                                                                                                                                                                      TTCCTAATTGCAGTGAAAAGAAAAACCACAGAAACTCTGGGAATTTTGATTACATTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTATATTTCTTTCAGGATATCCATTCTGGGGCTCTGTTTTGTTCATTAATTCTGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCTTTTCTTTTGGAGTTATCTTCCTTTTCACCTTGTTAAAACCATATCCAAGGTTTCCC
                                                                                                                                                                                                                         AX179785 41:
Sequence 5 from 1
AX179785
AX179785.1 GI:1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 450)

Walke, D.W. and Turner, C.A.

Human membrane proteins and polynucleotides encoding the same having homology to cd20 proteins and ige receptors

Patent: WO 0146417-A 7 28-JUN-2001;
                                                                                                                              1 (bases 1 to 417) Walke, D.W. and Turner, C.A.
                                                                                        Human membrane proteins and polynucleotides encoding having homology to cd20 proteins and ige receptors Patent: WO 0146417-A 5 28-JUN-2001;
                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                     Homo sapiens
                                                                               exicon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lexicon
             115
                                                                                                                                                                                                                                                                                                                                   365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                               Genetics Incorporated (US)
Location/Qualifiers
             ù
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genetics Incorporated (US) Location/Qualifiers 1. .450
            /organism="Homo sapiens"
/db_xref="taxon:9606"
91 c 69 g 14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
4 94 c 77 g 15
                                                                                                                                                                                                                           GI:15132146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     51.4%;
97.0%;
                                                                                                                                                                                                                                                 417 bp DNA
DM Patent WOO146417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 347.4;
Pred. No. 4e-7
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
             142 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4e-71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6,
                                                                                                                                                                                                                                                                 PAT
                                                                                                                                                           Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     450;
                                                                                                                                                                                                                                                                 06-AUG-2001
                                                                                                                                                                      Euteleostomi;
                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           152
                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212
                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
```

```
QY
                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
AX179783
LOCUS
          γ
                                망
                                                                         밁
                                                                                          οy
                                                                                                                 Вb
                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γQ
                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Sim
Matches 343;
                                                                                                                                                          Matches
                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                     source
            570
                                                                                                                                     390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                121
                                                    510
                                                                                            450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153
                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33
                                                                                                                 1 ATGAATCTTCTTAGTGCCCTGAGAGCAATAGCTGGAATCATTCTCCTCACATTTGGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _
                                                                                                                                                                                                                                               œ
                                                                                                                          atgaatcttcttagtgccctgagagcaatagctggaatcattctcctcacatttggtttc 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  atttototgcotttotcaattttggggtgccactcagaggattgtgattgtgaacaatgt
                                          actgtcctgttcttgggaattttgattacattgatgactttcagcattattgaattattc
                                                                                    atcctagatcaaaactacatttgtggttattctcaccaaaatagtcagtgtaaggctgtt 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 92
                                                                         ATCCTAGATCAAAACTACATTTGTGGTTATTCTCACCAAAATAGTCAGTGTAAGGCTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ttcctaattgcagtgaaaagaaaaccacagaaactctgataata 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcagaatatgagtccacagaactttcagccacgacctttccaactcaaagccccttgcaa 152
                                ACTGTCCTGTTCTTGGGAATTTTGATTACATTGATGACTTTCAGCATTATTGAATTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCTAATTGCAGTGAAAAGAAAAACCACAGAAACTCTGATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCCTTGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT
                                                                                                                                                           246;
                                                                                                                                                                                                                                                                                                                                                                                         AX179783 246 bp DNA
Sequence 3 from Patent WO0146417
AX179783
AX179783.1 GI:15132145
                                                                                                                                                                                                                                                                                                                                                                      human.
                                                                                                                                                       36.4%; Score 246; DB 6; ilarity 100.0%; Pred. No. 1.7e-47; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                        60
                                                                                                                                                                                                                        þ
                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
45 c 47 q 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 341.8; DB 6
Pred. No. 8.1e-70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                        94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2,
                                                                                                                                                                                                                                                                                                                                                                                                                        PAT
                                                                                                                                                                             Length
                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    417;
                                                                                                                                                                                                                                                                                                                                                                                                                       06-AUG-2001
                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                        Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                         same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                    569
                                                                         120
                                                                                                                 60
            629
                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212
                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

В

181

ATTTCTCTGCCTTTCTCAATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGT 240

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
AC027787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTTGA 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgttga 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Howland, J.C., Tilev.I., Johnson, R., Jones, C., Kann, L., Karatas, A., Howland, J.C., Tilev.I., Johnson, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., McIdrim, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Nell, D., Olivar, T. M., Oliver, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Travers, M., Trigilio, J., Vassiliev, H., Viel, R., VO, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., VO, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., VO, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., W., Y., Wyman, D., Ye, W.J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Walland, R., W.J., Wyman, D., Ye, W.J., Whilson, B., Wal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Boguslavkiy, L., Boukhgalter, B., Brown, A., Burkett, B., Collins, S., Campopiano, A., Castle, A., Cheepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., Dehrellano, K., Dewar, K., Diaz, J.S., Dodge, S., Domino, M., Doyle, M., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Galagan, J., Gardyna, S., Ginde, S., Heaford, A., Horton, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (01-APR-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Aug 18, 2000 this sequence version replaced gi:7382629. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Anderson, S., Baldwin, J., Barna, N., Bastra., Parkett, G.,
Boouslavkiy, L., Boukhgalter, B., Brown, A., Burkett, G.,
Colangelo, M., Collins, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens chromosome SEQUENCE SAMPLING:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birren, B., Linton, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Birren, B., Linton, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC027787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota;
                                                                                                                                                                                                      NOTE: This record contains 163 individual sequencing reads that have not been assembled into contigs. Runs of N are used to separate the reads and the order in which they appear is completely arbitrary. Low-pass sequence sampling is useful for identifying clones that may be gene-rich and allows overlap relationships among clones to be deduced.
                                                                                        will be sequenced to completion. In the event
the record is updated, the accession number wi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 138097)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 138097)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center code:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center: Whitehead Institute/ MIT Center for Genome Research
                                                preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTGS_PHASEO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 //ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                              it should not be assumed that this clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       138097 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -- Genome Center
                                                                               is updated,
663: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grant,G., Hagos,B., Heaford,A., Horton,L.,
iev_I., Johnson,R., Jones,C., Kann,L., Karatas,A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nusbaum, C., Lander, E., Abraham, H., Allen, N., Barna, N., Bastien, V., Beda, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nusbaum, C. and Lander, E ne 15, clone RP11-196E16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA HTG 18-AUG-2000 15 clone RP11-196E16 map 15, LOW-PASS
663 bp in length
```

```
7938
8633 8732: gar
9430: /
                                                                                                                                         26766
                                                                                                                                                                                                                                                                                   24392
                                                                                                                                                                                                                                                                                                                                23596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10981 11080: gap of 100 bp
11081 11783: contig of 703 bp
11784 11883: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .3390 13489: gap of
.3490 14186: con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2583 12682:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0215 10314:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9431 9530:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        838 7937: gap
938 8632:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 7140: 9-
7837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ა 1564: ყ.
2268:
ფონ
                                                                                                   26865: gap of 100 b
27563: continue 100 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19773:
                                                                                                                                                                                                                                                                                                                                                                                                                                    21333: gap of 
22042: contig
                       28477: gap of 
29184: con
                                                                  27663: gap
28377: c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6334:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5523: gap of 6234: co
                                                                                                                                                                                                                                                                              24491:
                                                                                                                                                                                                                                                                                                                                                                         22908:
                                                                                                                                                                                                                                                                                                                                                                                                                        22142:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20536:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19062:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18278:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17476:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16683:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15896:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15096:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14286:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4726:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3142:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3920:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          763:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18962: contig of 684 bp in length 9062: gap of 100 bp 19673: contig of 611 bp in 1773: gap of 100 bp 19673: contig of 611 bp in 100 bp 19673: contig of 611 bp in 100 bp 19673: gap of 100 bp 19673: g
                                                                                                                                                   100 b
6081: gap of 100 5
76765: contideration 100 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 bp 100 bp 15796; contig of 700 bp 5896; gap of 100 bp 16583; contig of 687 bp 6683; gap of 100 bp 17376; contig of 693 bp 17376; contig of 693 bp 17376; contig of 693 bp 1700 bp 100 bp 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1(
242: gap of
3820: ~
                                                                                                                                                                                                                                                  25190: cont
                                                                                                                                                                                                                                                                                                                                                                                       142: gap of
22808: cont
                                                                                                                                                                                                                                                                                                                                     23595: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9430: contig of 698 l

10: gap of 100 bp

10214: contig of 684 k

14: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21233:
                                                                                                                                                                                                                                                                                                      24391:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20436: contig of 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
12582: contig of 699 bp in
92: gap of 100 hr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14: gap of 100 bp
10980: contig of 666 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7040:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14996:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5423:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4626:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3820: contig of (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
1632: contig of 695 bp
gap of 100 km
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 bp
837: contig of 697 b
gap of 100
632:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               יישי: contig of 706
gap of ירי
זיין
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gap of
                                                                                                                                                                                                                             90: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                                                                                                                                       gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of
contig
                                                                                          contig of contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            p of 100 bp contig of 702 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         p of 100 bp contig of 697 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    p of 100 bp contig of 707 bp
                                                                  contig of
                                                                                                                                                                                                                                                                                               contig of
                                                                                                                                                                                                                                                                                                                                          p of 100 bp
contig of 687 bp
                                                                                                                                                                                                                                                                                                                                                                                         contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   p of 100 bp
contig of 710 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of 100 bp
contig of 711 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
g of 709 bp
                       of.
                                                                                                                                                                                                                                                       of 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 bp
100 bp
- 463 bp in 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                  100 bp
of 714 bp
                                                                                                               100 bp
of 698 bp
                                                                                                                                                                                                                                                       100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100
                                                                                                                                                                                                       100 bp
                                                                                                                                                                                                                                                                                                                                                                                              100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 bp
                                                                                                                                                                                    100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                         100 bp
                                               100 bp
                                                                                                                                                                                                                                                                                                    696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                678 p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        698 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ďq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ďq
                       in
                                                                    ij
                                                                                                                                                            in
                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                         in
                                                                                                                                                                                                                                                                                                    in
                                                                                                                                                                                                                                                                                                                                                 ĺ'n
                                                                                                                                                                                                                                                                                                                                                                                            in length
                                                                                                                                                                                                                                                                                                                                                                                                                                         in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                  length
                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                               length
                                                                                                                                                          length
                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
```

```
Matches
 109564
                                                                  Local
              1 tcatctcctttcaaattatcaaccgacaccattcatggattcaaggcaccgcacacagtccgg 60
TCATCTCCTTTCAAATTATCACCGACACCATCATGGATTCAAGCACCGCACACAGTCCGG
                                                                  Similarity
                                                                                                                                                                                            51608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41892 41991:
                                                                                                                                                                                                                                                                                                                                               47581:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ap of

icontig of 725 bp 1..

gap of

J8: contig of 700 bp in length

gap of

100 bp

892: contig of 684 bp in length

2: gap of

100 bp

8672: contig of 680 bp in length

72: gap of

100 bp

39475: contig of 703 bp in length

4090: contig of 703 bp in length

41891: contig of 697 bp in length

41891: contig of 697 bp in length

41891: contig of 697 bp in length

41891: contig of 698 bp in length

61891 contig of 698 bp in length

61891 contig of 688 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30083: ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37208: gap of
37892: contig
37992: gap of
                                                                                                                                                                             52420:
                                                                                                                                                                                                         51607:
                                                                                                                                                                                                                                   50784:
                                                                                                                                                                                                                                                                                        49177:
                                                                                                                                                                                                                                                                                                                                                                           46783:
                                                                                                                                                                                                                                                                                                                                                                                                      45980:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            44395:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43600:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41187:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40390:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34835:
                                                                                                                         54033:
                                                                                                                                                                                                                                                              49979:
                                                                                                                                                                                                                                                                                                                    48390:
                                                                                                                                                                                                                                                                                                                                                                                                                                  45188:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42779:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39575:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38772:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36408:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    35583:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34051:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33257:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32460:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31665:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30875:
                                                                                                                                                                                                                                                                                               44295: contig of 695 bb i.
14395: gap of 100 bp
45088: contig of 693 bb i.
15188: gap of 100 bp
45880: contig of 692 bp i.
15980: gap of 100 bp
46683: contig of 703 bb i.
6783: gap of 100 bp
47481: contig of 698 bp ir
6783: gap of 698 bp ir
6783: gap of 100 bp
47890: contig of 709 bp ir
8390: gap of 100 bp
48290: contig of 698 bp ir
8390: gap of 100 bp
48290: contig of 698 bp ir
                                                                                                     53133: contig of 713 bp i
3233: gap of 100 bp
323933: contig of 700 bp i
4033: gap of 100 bp
54703: contig of 670 bp i
                                                                                                                                                                                                             cont

-: gap of

51507: ~
                                                                 27.4%;
96.9%;
                                                                                                                                                                                                                                                       1/1: gap of 100 bp 49879: contig of 702 bp 179: gap of 100 contig of 702 bp 179: gap of 100 continues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42679: contig of 688 bp in length
779: gap of 100 bp
43500: contig of 721 bp in length
600: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34735: contig of
335: gap of 1
35483: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              365: gap of 100 bp
32360: contig of 695 bp
160: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31565
                                                                                                                                                                                                                                             79: gap of 100 bp 50684: contig of 705 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33951:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33157:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29983: contig of 699 bp
                                                                                                                                                                                                      gap
                                                                                                                                                                             gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      contig of 648 bp in 1 ap of 100 bp contig of 725 bp in 1 ap of 100 bp
                                                                                                                                                                          p of 100 bp contig of 713 bp
                                                                                                                                                                                                                 p of 100 bp
contig of 723 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig of 697 bp in p of 100 bp contig of 694 bp in
                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig of
                                                                 Score 185.4;
Pred. No. 3.8
                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 684 bp
100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dq 069
                                              ; DB 2;
3.8e-33;
6;
                                                                                                         in length
                                                                                                                                   in length
                                                                                                                                                                in
                                                                                                                                                                                         in length
                                                                                                                                                                                                                    in length
                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                     ij
                                                                                                                                                                                                                                                                                                                               in length
                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                                                      in length
                                                                                                                                                                                                                                                                                                                                                                                                                   'n
                                                                                                                                                                                                                                                                                                                                                                                                                                             in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in Length
                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                     Indels
                                                                               Length 138097;
                                                    0;
                                                    Gaps
109623
                                                     0,
```

6 A 68

61

tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120

```
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
AC027787/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 109624 TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grant, G., Ginde, S., Goyette, M., Graham, L., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Iliev, I., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., McCarthy, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Olivar, T.M., Oliver, J., Peterson, K., Pierre, N., Pisani, C., Pollara, Y., Raymond, C., Riley, R., Rogov, P., Rothman, D., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Travers, M., Trigillio, J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Vieng, G., Zainoun, J., Zimmer, A., and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tagggactatccaga 195
||||| | |||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCACGACCTTTTCAACTCAAAGCCCCTTGCAAAAATTATTTGCTAGAAAAATGAAAATCT 109743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAGGGGTAAGTAAGA 109758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgtattt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (01-APR-2000) Whitehead Institute/MIT Center Research, 320 Charles Street, Cambridge, MA 02141, USA On Aug 18, 2000 this sequence version replaced gi:73826 All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., Allen,N., Anderson,S., Bailwin,T., Barna,N., Bastien,V., Beda,F., Boukhgalter,B., Brown,A., Burkett,G., Campopiano,A., Castle,A., Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Collymore,A., Cooke,P., Dearellano,K., Dewar,K., Diaz,J.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 138097)
Birren, B., Linton, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dodge, S., Domino, M., Doyle, M., Ferreira, P., FitzHugh, W., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HTG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens chromosome
NOTE: This record contains 163 individual sequencing reads that have not been assembled into sequencing reads that have not been assembled into contigs. Runs of N are used to separate the reads and the order in which they appear is completely arbitrary. Low-pass sequence sampling is useful for identifying clones that may be gene-rich and allows in the particular arbitrary in the same particular arbitrary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Birren,B., Linton,L., Nusbaum,C. and Lander,E. Homo sapiens chromosome 15, clone RP11-196E16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                            Contact: sequence_submissions@genome.wi.mit.edu
------- project Information
Center project name: L9008
Center clone name: 196_E_16
                                                                                                                                                                                                                                                                                                                                                                                          Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                           Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center: Whitehead Institute/ MIT Center for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HTGS_PHASEO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAMPLING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 to 138097)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             138097 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-AUG-2000
15 clone RP11-196E16 map 15, LOW-PASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g1:7382629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gage, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109683
```

```
However, it should will be sequenced the record is update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          preserved.
                                                                                                                                                                                                                                                                                                                                                                                  1080: gap of 10,1183: contig of 6, 1183: contig of 76, 1183: gap of 10,1183: gap of 1,12582: contig of 76, 1,12582: contig of 76, 1,12582: contig of 76, 1,12582: contig of 1,12582: con
                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 8732: gap of 100
3 9430: contin f
                                                                                                                                                                                                                                                                                                                                        3 12682: gap of 10
3 1389: contig of 7
0 13489: gap of 10
14186: contig of 6
7 14286: gap of 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 5523: yr.
6234: /
                                                                                                                                                                                                                                               4 16683: gap of
4 17376: contig
7 17476: gap of
7 18178: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) 2368; ga
            26081: gap
26765:
26865: gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1464:
1564: gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    763:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .3142:
                                                                                                                       22142: gap of 
22808: contig
                                                                                                                                                                                  19773: gap of 20436: contig
                                                                                                                                                                                                                                                                                                  15896:
                                                                                                                                                                                                                                                                                                           15096: gap of 15796: con:
                                                                                                                                                                                                                                                                                                                                                                                                                                         10314:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              9530:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7937:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3920:
                                                                                            23695:
                                                                                                                22908:
                                                                                                                                                        21333:
                                                                                                                                                                            20536:
                                                                                                                                                                                                                   19062:
                                                                                                                                                                                                                                       18278:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7140:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4726:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 it should not be assumed that this clone sequenced to completion. In the event that is updated, the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                        : contig c
: gap of
10214: cc
314:
                                              491: gap or
25190: contig of
qap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1\(\frac{1}{42}\); gap of \(\frac{3820}{0}\); \(\frac{1}{1}\)
                                                                                                                                                                                                                                                                                  Jo: gap of
16583:
27563: cr
                                                                                               gap c
23595:
                                                                                                                                           22042: c
                                          25981: c
                                                                                                                                                                                                                                                                                                                                                                                                                         10980:
                                                                                                                                                                                               18962: contig
062: gap of
19673: contig
773: gap of
                                                                                 95: gap of
24391: contig
                                                                                                                                                                21233: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6: gap
5423:
                                                                                                                                                                                                                                                                                                                            36: gap of 1
14996: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7040:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4626:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7837:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /837: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gap of
                                81: contig
                                                                                                                                                                                                                                     gap
                                                                                                                                                                         gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      contig
                                                                                                                                                                                                                                      contig of up of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig
of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                contig
of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig
of
                                                                                                     contig
                                                                                                                                           contig of
                                                                                                                                                                                                                                                                                      contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig of
                       contig
                                                                                                                                                                                                                                                                                                        contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig
                                                                                                                of.
                                                                                                                                                        of
                       of.
                                            of.
                                                               ō,
                                                                                  of
                                                                                                      of
                                                                                                                         of.
                                                                                                                                                                                      of.
                                                                                                                                                                                                        of
                                                                                                                                                                                                                            of
                                                                                                                                                                                                                                                                    of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           o
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of
t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 663 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                             100 bp
107 bp in
                                                                                                                                                                                                                                                                                                  100 bp in '
                                                       مر
مام 190
مام 190
مام 190
                                                                                                                                                                                                                          100 bp
if 702 bp in
100 bp
if 684 bp in
                                                                                                                                                                                                                                                                   100 bp
f 693 bp
                                                                                                                                                                                                                                                                                       100 bp
f 687 br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
f 711 h
                                                                                                                                                                 100 bp
f 697 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                              00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                             0 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       00
                                100 bp
                                                                                                      687
                                                                                                                                                      100 bp
                                                                                                                                                                                                                   100 bp
                                                                                                                                                                                                                                                                                                                                         100 bp
                                                                                                                                                                                                                                                                                                                                                            100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                      100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00 bp
695 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               00 bp
678 bp
                                                                                                                          666
                                                                                                                                              709
                                                                                                                                                                                                                                                                                                                                                                                                                                 666
                                                                                                                                                                                    663 bp
                                                                              م مور ر
                                                                                                                    طور
طور
                                                                                                                                                                                                                                                                                                                                                                                                dq .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 đđ
                                                                                                               þp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in length
                       đđ
                                                                                                                                                                bp in
                                                                                                                                                                                                        đđ
                                                                                                                                                                                                                                                                                       фþ
                                                                                                                                                                                                                                                                                                                                                  bp in
                                                                                                                                                                                                                                                                                                                                                                                                           ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in
                                                                                                                                            bp in
                                                                                                                                                                                                                                                                                                                                                                                                                               bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bp in
                                                                                  in
                                                                                                                                                                                     ij
                                                                                                                                                                                                                                                                                      in
    in
                        'n
                                           in
                                                                                                     in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in
                                                               in
                                                                                                                         Ħ
                                                                                                                                                                                                        in
                                                                                                                                                                                                                                                                    in
                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in
   length
                       length
                                                                                 length
                                                                                                                                            length
                                                                                                                                                                length
                                                                                                                                                                                    length
                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                     length
                                                                                                                                                                                                        length
                                                                                                                         length
                      Similarity
            Conservative
                                 34 54033: gap of 4 54703: cr
                                                                                    108 51607: contig of 71

108 51607: gap of 10

10 52320: contig of 71

21 52420: gap of 100

11 53133: contia of 71

4 53777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28377: ~
28377: ~
*8 28477.
                                                                                                                                                                                   48290: contig of 7
1 48390: gap of 10
1 49077: contig of 6
8 49177: gap of 10
                                                                                                                                                                                                                                                                                                                                                                                                                                       3 37992: gap of 10
3 38672: contig of 0
3 38772: gap of 10
3 39475: contig of 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d 33257: gar
a 33951:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 32460: gap of
1 33157: contig of
8 33257: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 28477: gap of
8 29184: contig c
5 29284: gap of
5 29983: contig c
                                                                                                                                                                                                                                                                                                                    0 42779: gap of
0 43500: contig
1 43600: gap of
1 44295: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) 36408; ga)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 30083: gap o
4 30775: cr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35583: gap
36308: c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34835: gap of
35483: contig
35583: gap of
                                                                                                                                                                                                                                                                                                                                                                                                  40390: gap of
41087: cont
                                                                                                                                            50784:
                                                                                                                                                                49979:
                                                                                                                                                                                                                            47581:
                                                                                                                                                                                                                                                46783:
                                                                                                                                                                                                                                                                                                          44395:
                                                                                                                                                                                                                                                                                                                                                                     41991:
                                                                                                                                                                                                                                                                                                                                                                                         41187:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37208:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34051:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31665:
                                                                                                                                                                                                                                                                    45980:
                                                                                                                                                                                                                                                                                                                                                     1: contig c
1: gap of
48290:
                                                                                                                                                                                                                                  3188: gap of 10
45880: contig of 05
5980: gap of 10
46683: contig of 7
5783: gap of 10
47481: contig of 6
                                                                                                                                                                                                                                                                                                                                                                                                                37892; cont
                                                                                                                                                                        49879: c
                     27.48;
96.98;
                                                                                                                                                                                                                                                                                           45088: cc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        con
21: gap of
34735:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31565:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32360:
                                                                                                                                                                                                                                                                                                                                                                                    987: contig (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap
                                                                                                                                                              gap of
           Score 185.4;
Pred. No. 3.8e
0; Mismatches
                                                                                                                                                                        contig
                                                                                                                                                                                                                                                                                                                  contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               p of 100 bp contig of 700 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     contig of
                                                                                                                                                    contig
                                                                                                                                                                                                                                                                                               contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of.
                                                                                                                                                                                                                                                                                                                                        100 bp
g of 721 bp
                                                                                                                                                      of
                                                                                                                                                                           of
                                                                                                                                                                                                                                                                                                                                                                                                  of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                         100 bp
                                                                                                                                                                                                                                                        100 bp
of 703 bp
                                                                                                                                                                                                                                                                                                100 bp
of 693 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                      f 680 bp
100 bp
f 703 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
f 680 bp
                                                                                                              100 bp
f 713 bp
                                                                                                                                                      100 bp
f 705 bp
                                                                                                                                                                                                                                                                            100 bp
f 692 bp
                                                                                                                                                                                                                                                                                                                    100 bp
f 695 bp
                                                                                                                                                                                                                                                                                                                                                                    100 bp
f 704 bp
                                                                       100 bp
                                                                                                                                  100 bp
f 723 bj
                                                                                                                                                                                                                           100 k
                                                                                                                                                                                                                                                                                                                                                                                                   100 l
f 697
                                                                                                                                                                                                                                                                                                                                                                                                                      100 k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 bp
f 684 bj
                                                                                                                                                                                   100 bp
                                                                                                                                                                                                                                                100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100 bp
                                                                                                                                                                                                                   709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       697
                                                                                                                                                                           702
                                                                                                                                                                                               687
                                                                                                                                                                                                                                                                                                                                                            688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   694
                       3.8e-33
                                                                                                                                                                                         d dd
                                                                                                                                                                                                                                                                                                                                                                                              ر قور د
                                                                                                                                                                                                                                                                                                                                                                                                                 ٷ
ٷ
ؙٷ
                                                                                                                                                                                                                                     đq
                                                                                                                                                                                                                                                                                                                                                           ďq
                                                                                                                                                                                                                                                                                                                                                                              þ
                                                   in
                                                                       'n
                                                                                           in
                                                                                                              ä
                                                                                                                                  'n
                                                                                                                                                      'n
                                                                                                                                                                         'n
                                                                                                                                                                                              Ín
                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                         in
                                                                                                                                                                                                                                                                             in
                                                                                                                                                                                                                                                                                                in
                                                                                                                                                                                                                                                                                                                    in
                                                                                                                                                                                                                                                                                                                                        'n
                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                              in
                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                    in length
                                                                                                                                                                                                                                                                                                                                                                                                                                        in
                                                                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                    length
                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                           length
                                                   length
                                                                                                                                 lengtl
                                                                                                                                                                         Length
                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                           lengt
                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                           length
                                                                                                              length
                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
```

Length 138097; 0; Gaps

```
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 1
AC015840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     112397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  112577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAGGGGTAAGTAAGA 112383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ccacgacctttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCATCTCCTTTCAAATTATCACCGACACCATCATGGATTCAAGCACCGCACACAGTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tagggactatccaga 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCACGACCTTTTCAACTCAAAGCCCCTTGCAAAAATTATTTGCTAGAAAAATGAAAATCT 112398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (17-NOV-1999) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Apr 27, 2000 this sequence version replaced gi:6446828. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Birren, B., Linton, L., Nusbaum, C., Lander, E., Allen, N., Anderson, M., Baldwin, J., Barna, N., Beckerly, R., Boguslavkiy, L., Boukhgalter, B., Brown, A., Castle, A., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Domino, M., Donelan, L., Doyle, M., Ferreira, P., FitzHugh, W., Forrest, C., Funke, R., Gage, D., Ferreira, P., FitzHugh, W., Forrest, C., Funke, R., Gage, D., Galagan, J., Gardyna, S., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., Leboczky, J., Lieu, C., Locke, K., Macdonald, P., Marquis, N., McEwan, P., McGurk, A., McKernan, K., McLaughlin, J., Meldrim, J., Morrow, J., Naylor, J., Norman, C. H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Donnell, P., McGurk, A., McKernan, C., H., O'Connor, T., O'Connor, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Tirrell, A., Vassiliev, H., Vo, A., Wheeler, J., Wu, X., Wyman, D., Ye, W.J., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Birren, B., Linton, L., Nusbaum
Homo sapiens, clone RP11-24D1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC015840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HTG; HTGS_PHASE1; HTGS_DRAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC015840.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 147788)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 147788)
Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731
Consensus quality: 136347 bases at least Q40
Consensus quality: 143600 bases at least Q30
Consensus quality: 146212 bases at least Q20
Insert size: 203000; agarose-fp
Insert size: 147388; sum-of-contigs
Quality coverage: 5.2 in Q20 bases; agarose-fp
                                                                                                                                                                                                                                                                                        Center project name: L4434
Center clone name: 24_D_1
------ Summary Statistics
Sequencing vector: M13; M77815; 100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center: Whitehead
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           147788 bp DNA HTG 27-APR-2000 ns clone RP11-24D1, WORKING DRAFT SEQUENCE, 5 unordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:7657730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                    Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Institute/ MIT Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nusbaum, C. and Lander, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      112458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              112518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                    ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                   RESULT 12
AP003127/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                   Db 128195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Db 128135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db 128075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 128015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
```

```
Matches 189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                              61 tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 tcatCtcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg 60
                                                                                                                                                                                                                                                                                     TAGGGGTAAGTAAGA 128209
                                                                                                                                                                                                                                                                                                                                                              tagggactatccaga 195
                                                                                                                                                                                                                                                                                                                                                                                                                                     TCATCTCCTTTCAAATTATCACCGACACCATCATGGATTCAAGCACCGCACACAGTCCGG 128074
                                                                      AP003127 161039 bp DNA
Homo sapiens chromosome 11 clc
SEQUENCE, 15 unordered pieces.
AP003127.1 GI:12597183
HTG; HTGS_PHASE1; HTGS_DRAFT.
Homo sapiens DNA, clone:RP11-710G6.
                                                           AP003127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOTE: This is a 'working draft' sequence. It currently consists of 5 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Quality coverage: 7.1 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6594: contig of 6594 bp in length
6595 6694: gap of 100 bp
6695 16187: contig of 9493 bp in length
16188 16287: gap of 100 bp
16288 25089: contig of 8802 bp in length
25090 25189: gap of 100 bp
63923: contig of 8734 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63924 64023: gap of 64024 147788: conf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="assembly_fragment"
64024. .147788
/note="assembly_fragment"
29482 c 28861 g 43569 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vector_side:right"
25190. .63923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clone_end:SP6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16288.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clone_end:T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="RP11-24D1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="RPCI-11 Human
1. .6594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .16187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .25089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig of 83765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 185.4; DB 2
Pred. No. 3.8e-33;
                                                                                            DNA HTG
11 clone RP11-710G6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Male
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              фþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                410 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 147788;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                            30-JAN-2001 map 11q, WORKING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                128134
                                                                                                DRAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

JOURNAL REFERENCE

TITLE

AUTHORS

TITLE JOURNAL

COMMENT

REFERENCE AUTHORS

ORGANISM

```
* NOTE: This is a 'working draft' sequence. It currently consists of 15 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOTE: This is a 'working draft' sequence. It currently consists of 15 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                are unknown.
as soon as i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Jap (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (26-JAN-2001) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Published Only in DataBase (2001) In press (2001) Published Only in DataBase (2001) Published Only in DataBase (2001) Published Only in Published Only in DataBase (2001) Published Only in Published 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 161039)
Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. & Homo sapiens 161,039 genomic DNA of 11q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center project name: HumDraft11

Center clone name: RP11-71066

Center clone name: RP11-71066

Sequencing vector: PCR products; 100% of reads
Chemistry: Dye-terminator ET-amersham; 100% of reads
Assembly program: Phrap; version 0,990329

Consensus quality: 157456 bases at least Q40

Consensus quality: 159457 bases at least Q30

Consensus quality: 159457 bases at least Q20

Insert size: 15639; sum-of-contigs

Quality coverage: 8.61x in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154260
157787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Web site: http://hgp.gsc.riken.go.jp/
Contact: hattori@gsc.riken.go.jp
Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center code: RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center: RIKEN Genomic Sciences Center(GSC)
                       42323 42422: contig of 42322 bp in length
42323 42422: gap of 100 bp
42423 63418: contig of 2099 bp in length
63419 63518: gap of 100 bp
63519 77969: contig of 14451 bp in length
77970 78069: gap of 100 bp
78070 93182: contig of 15113 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             as it is available and the accession number will be
     93282:
                                                                                                                                                                                                                                                                                                                                                                                                                                               104093 contig of
115702 contig of
125183 contig of
137258 contig of
137219 contig of
143276 contig of
148272 contig of
148922 contig of
154159 contig of
1574159 contig of
1574159 contig of
1574159 contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                     20996 bp 20996 bp 20996 bp 14451 bp 15113 bp 11509 bp 11509 bp 9381 bp 9381 bp 5957 bp 5957 bp 5957 bp 5957 bp 5137 bp 5137 bp 1448 bp 1448 bp 1405 bp 1705 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Sakaki, Y.
                                                                                                   Db 149590
                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                      Query Match
Best Local S
Matches 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                          61 tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG
                                                                                                                                                                                                                      al Similarity
189; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         * 14327 14376: contig of 55

* 14327 14376: gap of 10

* 14327 14376: gap of 55

* 143377 143922: contig of 55

148923 149022: gap of 100

149023 154159: contig of 513

154160 154259: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  159235 159334: gap of
159335 161039: contig of
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             157687 157786: gap of
157787 159234: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              132559 132658: gap of 
132659 137219: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             125184 125283: gap of 125284 132558: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     115703 115802:
                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93283 10409:
L04094 104193:
                                                                                                                                                                                                                                                                                                                                                                                       159335. .161039
/note="assembly_fragment"
31166 c 31523 g 47795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="assembly_fragment"
157787. .159234
|note="assembly_fragment"
| note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="assembly_fragment"
42423. .63418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="assembl
137320. .14327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="assembly
132659. .137219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note="assembly_fragment clone_end:T7 vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25284. .132558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="assembly_fragment"
18070. .93182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="RP11-710G6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .161039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .42322
                                                                                                                                                                                                                                                27.48; 96.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             125183:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     115702:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104093: contig of 10811 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .104093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .14892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gap of 100 bp
6: contig of 3427 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig of 5137
                                                                                                                                                                                                                      Score 185.4; DB 2;
Pred. No. 3.8e-33;
O; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of 9381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contig of 11509 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ly_fragment clone_end:SP6 vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     y_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of
                                                                                                                                                                                                                                                                                                                                                                                             47795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
9381 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
5546 bp
100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
7275 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
1448 bp in length
                                                                                                                                                                                                                                                                                                                                                                                          rt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                                                                                          1400 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                        Length 161039;
```

0;

Gaps

0;

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
AP001034/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db 149470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAGGGGTAAGTAAGA 149456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tagggactatccaga
                                                                                                                                                                                                                                                                                              order in this sequence record is arbitrary. Gaps between the contigs are represented as runs N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
On Nov 14, 2000 this sequence version replaced gi:8117704.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (06-JAN-2000) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y. Homo sapiens 166,804 genomic DNA of 11q12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AP001034
AP001034.4 GI:11176992
                                                                                                                                                                                                                                                                                                                                                                                      NOTE: This is a 'working draft' sequence. It currently consists of 19 contigs. The true order of the pieces is not known and their
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hon
Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Published Only in DataBase (2000) In press 2 (bases 1 to 166804)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AP001034
                                                                                                                                                                                                                                                                    preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 166804)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Assembly program: Phrap; version 0.990329 Consensus quality: 163254 bases at least Q40 Consensus quality: 163858 bases at least Q30 Consensus quality: 164544 bases at least Q20 Insert size: 165004; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequencing vector: PCR products; 100% of reads
Chemistry: Dye-terminator ET-amersham; 100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center: RIKEN Genomic Sciences Center(GSC)
Center code: RIKEN
Web site: http://hgp.gsc.riken.go.jp/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Quality coverage: 9.28x in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: hattori@gsc.
                         126403
133580
                                                                         93819
108158
117107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center clone name: RP11-729B4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center project name: HumDraft11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HTGS_PHASE1; HTGS_DRAFT.
sapiens DNA, clone:RP11-729B4.
                                                                                                                                                45339
64379
77680
                                                                                                                                                                                                                    22499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---- Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          166804 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chromosome
                                                     126302
133479
                                                                                                108057
117006
                           40425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19 unordered pieces
                      contig
contig
contig
contig
                                                                                                                  contig
contig
contig
                                                                                                                                                                                           contig
                                                                                                                                                                                                                                         contig
                                                                                                                                                                                                                    contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         riken.go.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HTG 14-NOV-2000 clone RP11-729B4 map llq12, WORKING
  16039
14239
8849
9196
7077
                                                                                                                                                                    18940
13201
                                                                                                                                                                                                                    22398
22740
H
                                                                                                                                                                                                               length
length
                                             length
length
                                                                                                                    length
length
  length
                           length
                                                                                                Length
                                                                                                                                                                    length
                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hong-Seog, P., and Sakaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                             misc_feature
                                                                                                                                           misc_feature
  misc_feature
                                                                                                misc_feature
                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  144754 149354 contig of 4601 bp in length
149455 154522 contig of 5068 bp in length
154623 155919 contig of 1297 bp in length
156020 159504 contig of 3485 bp in length
159780 162418 contig of 2639 bp in length
162519 163383 contig of 2865 bp in length
1625484 166804 contig of 1321 bp in length
1655484 166804 contig of 1321 bp in length
1 165485 is a 'working draft' sequence. It currently
* consists of 19 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
* be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 156020 159504: contig of 3485 bg
159505 159604: gap of 100 bp
159605 159679: contig of 75 bp j
159605 159779: gap of 100 bp
159606 159779: gap of 2639 bg
162418: contig of 2639 bg
162419 162518: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            108058
108158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            155920 156019:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            154523 154622:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144654 144753: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     133480 133579:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126303 126402: gap of 126403 133479: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45239 45338: gap of 100 bp 64278: contig of 18940 bp in length 64279 64378: gap of 100 bp 64379 77579: contig of 13201 bp in length 77580 77679: gap of 100 bp 93718: contig of 16039 bp in length 100 bp 93718: contig of 16039 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              65384 165483; gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140426 140525:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L33580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22399 22498: gap of 22499 45238: con
                                             /note="assembly_fragment"
93819. .108057
                                                                                             /note="assembly_fragment"
77680. .93718
                                                                                                                                                64379.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9 93818: gap of 100 bp 108057; contig of 14239 bp in length 8 108157; gap of 100 bp 117006; contig of 8849 bp in length 117106; gap of 100 bp 1 126302; contig of 9196 bp in length 1 126402; gap of 100 bp 1 126402; gap of 1
                                                                                                                                                                                                                                              22499
                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                  /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                         /map="11q12"
                                                                                                                                                                                                                                                                                                                                                                     /chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                      note="assembly_fragment"
                                                                                                                                                                                                               note="assembly_fragment"
                                                                                                                                                                                                                                                               note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                     /clone="RP11-729B4"
                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         149454:
                                                                                                                                                                                                                                                                                                                                                                                                                                            .166804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140425; ~~
1050~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 t 100 t 100 t 144653: contig of 4128
                                                                                                                                                                                                                                                                                                22398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            166804:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       149354: contig of 
9454: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         165383:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4622: gap of
155919: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154522:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22398: contig of 22398 bp in length
98: gap of 100 bp
45238: contig of 22740 bp in length
                                                                                                                                                                                                .64278
                                                                                                                                                                                                                                                .45238
                                                                                                                                                .77579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig of 7077 br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ap of 100 bp contig of 75 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig of 2865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of 4601 bp - 100 bp - 100 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 bp
: 1297 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100 bp
4128 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
2865 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ί
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
```

```
VERSION
KEYWORDS
                                                                                                                   REFERENCE
                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                           AC090401/c
                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                     ORGANISM
                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 189; Conserv
                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 tagggactatccaga 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCATCTCCTTTCAAATTATCACCGACACCATCATGGATTCAAGCACCGCACACAGTCCGG 11728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAGGGGTAAGTAAGA 11593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCACGACCTTTTCAACTCAAAGCCCCCTTGCAAAAATTATTTTGCTAGAAAAATGAAAATCT 11608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG 11668
           2 (bases 1 to 166820)

Birren,B., Linton,L., Nusbaum,C., Lander,E., Allen,N., Anderson,S.
Barna,N., Bastien,V., Boguslavkiy,L., Boukhgalter,B., Brown,A.,
Camarata,J., Campopiano,A., Choepel,Y., Colangelo,M., Collins,S.,
Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S.,
Collymore,A., Cooke,P., DeArellano,K., Dewar,G., Diaz,J.S.,
Collymore,A., Cooke,P., DeArellano,K., Dewar,G., Gage,D., Galagan,J.,
                                                                                                                                 Homo sapiens chromosome 11, clone RP11-729B4 Unpublished
                                                                                                                                                                         1 (bases 1 to 166820)
Birren,B., Linton,L.,
                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                               SEQUENCE, 2
                                                                                                                                                                                                                                                                                                                                                                 AC090401 166820 bp DNA HTG
Homo sapiens chromosome 11 clone RP11-729B4
                                                                                                                                                                                                                                                                                                                                                                                         AC090401
                                                                                                                                                                                                                                                                                                             AC090401.2 GI:14971278
                                                                                                                                                                                                                                                                                         HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165484. .166804
/note="assembly_fragment"
1 31523 c 32296 g 50478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="assembly_fragment"
133580. .140425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="assembly_fragment clone_end:T7 vector_side:left"
159780. .162418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     159605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_fragment clone_end:SP6 vector_side:right"
156020. .159504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="assembly_fragment"
144754. .149354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="assembly_fragment"
117107. .126302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="assembly_fragment"
154623. .155919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   149455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="assembl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              140526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="assembl
                                                                                                                                                                                                                                                                                                                                                                                     166820 bp
                                                                                                                                                                                                                                                                                                                                             ordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .159679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .154522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .144653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .165383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .133479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
Goyette, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 185.4; DB 2; Pred. No. 3.9e-33; 0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .y_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .y_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50478 t
                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
Graham, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1801 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 166804;
                                                                                                                                                                                                                                                                                                                                                                 map 11, WORKING DRAFT
Grand-Pierre, N.,
                                                                                                                                                                                                                                                                                                                                                                                     21-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                           Anderson, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

QΥ

Вb δÃ

δÃ Ъ

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (17-FEB-2001) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Jul 20, 2001 this sequence version replaced gi:12958037. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hagos, B., Heaford, A., HOTLOU, L., DULLE, C., Karatas, A., LaRocque, K., Lamazares, R., Landers, T., Jones, C., Karatas, A., LaRocque, K., Lamazares, R., Macdonald, P., Lehoczky, J., Levine, R., Liu, G., MacLean, C., Macdonald, P., Marquis, N., Mathews, C., McCarthy, M., McEwan, P., McKernan, K., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., McRan, C., Norman, C.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Murphy.T., Naylor,J., Nguyen,C., Norbu,C., Norman,C.H., O'Connor,T., O'Donnell,P., O'Nell,D., Ollver,J., Peterson,K., Phunkhang,P., Pierre,N., Pollara,V., Raymond,C., Retta,R., Rieback,M., Riley,R., Rise,C., Rogov,P., Roman,J., Rosetti,M., Roy,A., Santos,R., Schauer,S., Schupback,R., Seaman,S., Severy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: sequence_submissions@genome.wi.mit.edu

Center project name: L12709
Center clone name: 729_B_4

Sequencing vector: Plasmid; n/a; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Assembly program: Phasp; version 0.960731
Consensus quality: 166378 bases at least Q40
Consensus quality: 16639 bases at least Q20
Consensus quality: 16639 bases at least Q20
Insert size: 166720; sum-of-contigs
Quality coverage: 12.2 in Q20 bases; sum-of-contigs
Quality coverage: 12.9 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sougnez,C., Spencer,B., Stange-Thomann,N., Stojanovic,N., Strauss,N., Subramanian,A., Talamas,J., Tesfaye,S., Theodore,J., Travis,N., Trigilio,J., Vassiliev,H., Viel,R., Vo,A., Wilson,B., Wu,X., Wyman,D., Ye,W.J., Young,G., Zainoun,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zembek,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NOTE: This is a 'working draft' sequence. It currently consists of 2 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      by the finished sequence as soon as it is available and the accession number will be preserved.

1095: contig of 1095 bp in length
1096 1195: gap of 100 bp
1196 16820: contig of 165625 bp in length.
Location/Qualifiers
                                     46436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          provided by the submittor. This sequence will be replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center: Whitehead Institute/ MIT Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center code: WIBR
                                     þ
                           vector_side:right"
31826 c 32895 g
                                                                                            clone_end:T7
                                                                                                                                                                    /note="assembly_fragment"
1196. .166820
                                                                                                                        /note="assembly_fragment
                                                                                                                                                                                                                                  1. .1095
                                                                                                                                                                                                                                                                 /clone_lib="RPCI-11 Human Male BAC"
                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="11"
                                                                                                                                                                                                                                                                                                   /clone="RP11-729B4"
                                                                                                                                                                                                                                                                                                                               /map="1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Heaford, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .166820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Horton, L., Hulme, W., Iliev, I., Johnson, R.,
                              9
                              55563
                              r+
                              100 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          It currently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Severy, P.,
```

27 . 48;

Score 185.4;

DB *ب*

Length 166820;

COMMENT

TITLE

ğ

Ş В 8 멍 δ

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db 143952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db 144132 TCATCTCCTTTCAAATTATCACCGACACCATCATGGATTCAAGCACCGCACAGATCCGG 144073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ESULT 15
2003127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity Matches 189; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144072 TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 tagggactatccaga 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAGGGGTAAGTAAGA 143938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCACGACCTTTTCAACTCAAAGCCCCTTGCAAAAATTATTTGCTAGAAAAATGAAAATCT 143953
                                                                                                    15 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (26-JAN-2001) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HTG 30-JAN-2001
Homo sapiens chromosome 11 clone RP11-710G6 map 11q, WORKING DRAFT SEQUENCE, 15 unordered pieces.
APP003127
                                                                                                                                                                                         NOTE: This is a 'working draft' 15 contigs. The true order of the
                                                        preserved
                                                                                 as soon as it is available and the accession number will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published Only in DataBase (2001) In press (2001) Published Only in DataBase (2001) In press (2001) Published Only in 161039)
Hattori, M., Jashii, K., Toyoda, A., Taylor, T.D., Hong-Seog, P., Fujiyama, A., Yada, T., Totoki, Y., Watanabe, H. and Sakaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hor
Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and
Homo saplens 161,039 genomic DNA of 11q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutherla; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AP003127.1 GI:12597183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 161039)
                                                                                                                                                                                                                                                                                             sequencing vector: PCR products; 100% of reads Chemistry: Dye-terminator ET-amersham; 100% of Assembly program: Phrap; version 0.990329 Consensus quality: 157456 bases at least Q40 Consensus quality: 158960 bases at least Q30 Consensus quality: 159457 bases at least Q20 Insert size: 159639; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  web site: http://hgp.gsc.riken.go.jp/
Contact: hattori@gsc.riken.go.jp
------Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center project name: HumDraftl1 Center clone name: RP11-710G6 ..... Summary Statistics
                                                                                                                                                                                                                                                                       Quality coverage: 8.61x in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center code: RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center: RIKEN Genomic Sciences Center(GSC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTGS_PHASE1; HTGS_DRAFT. sapiens DNA, clone:RP11-710G6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
     42423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -- Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96.9%;
42322 contig of 63418 contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 3.9e-33;
42322 bp
20996 bp
                                                                                                                                                                                                                  sequence. It currently consists of
o in length
o in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hong-Seog, P.,
and Sakaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                       reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   144013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                   misc_feature
                            misc_feature
                                                                              misc_feature
                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15935 161039 contig of 1705 bp in length.

NOTE: This is a 'working draft' sequence. It currently consists of 15 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               149023 154159: contig of 51
154160 154259: gap of 10
154260 157686: contig of 34
157687 157786: gap of 14
157787 159234: contig of 14
159235 159334: gap of 16
159335 161039: contig of 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             be preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              104194
115803
125284
132659
137320
143377
149023
154260
157787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143277 143376: gap of 100 b
143377 148922: contig of 5546
148923 149022: gap of 100 b
149023 154159: contig of 5137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63419 63518: gap of 100 bp 163519 77969: contig of 14451 bp in length 7970 78059: gap of 100 bp 78070 93182: contig of 15113 bp in length 93183 93282: gap of 100 bp 104093: contig of 10811 bp in length 104094 104193: gap of 10811 bp in length 104194 115702: contig of 11509 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115703 115802: gap of 100 k
115803 125183: contig of 9381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137220 137319: gap of 100 bp
137320 143276: contig of 5957 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          132559 132658:
132659 13721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125184 125283: gap of 100 bp
125284 132558: contig of 7275 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42323 42422: gap of 100 bp
42423 63418: contig of 20996 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93283
                                                                                                                              /note="assembly_fragment"
104194. .115702
                                                                                                                                                                                      /note="assembly_fragment"
93283. .104093
                                                                                                                                                                                                                                        /note="assembly_fragment"
78070. .93182
                                                                                 /note="assembly_fragment"
115803. .125183
                                                                                                                                                                                                                                                                                                   63519.
                            /note="assembly_fragment"
125284. .132558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .161039
/note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /chromosome="11"
                                                                                                                                                                                                                                                                                                                    note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                         note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                    'clone="RP11-710G6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /map="11g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                .42322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         77969 contig of 93182 contig of 104093 contig of 115702 contig of 125183 contig of 137219 contig of 137219 contig of 148276 contig of 148922 contig of 159186 contig of 159186 contig of 159186 contig of 159234 contig of 159234 contig of 161039 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
157686: contig of 3427 br
7786: apr of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          137219:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          159234: contig of 1448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42322: contig of 42322 bp in length
                                                                                                                                                                                                                                                                                                   .77969
                                                                                                                                                                                                                                                                                                                                                      .63418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig of 4561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72,
100 bp
's61 bp in )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 342,
100 bp
148 bp in J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
5546 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 bp
9381 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10811
11509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15451 bp
15413 bp
10811 bp
11509 bp
9381 bp
7275 bp
4561 bp
5546 bp
5546 bp
5137 bp
3427 bp
3427 bp
1448 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14451
15113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp dd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
length
length
length
length
length
length
length
length
length
length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
length
```

```
망
                                                                                                                    δÃ
Search completed: November 28, 2001, 23:52:04 Job time: 8367 sec
                                                                          γ
                                                                                                밁
                                                                                                                                         B
                                                                                                                                                              Ω
                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                          Query Match 23.2%; Score 157; DB 2; Length 161039; Best Local Similarity 91.7%; Pred. No. 1.6e-26; Matches 166; Conservative 0; Mismatches 15; Indels 0; Gaps
                                                                                                                                                                                46108 T 46108
                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                           548 t 548
                                                                                                                                                                                                                                                                                            /note="assembly_fragment"
15935. .161039
/note="assembly_fragment"
49155 a 31166 c 31523 g 47795 t 1400 others
                                                                                                                                                                                                                                                                                                                                     132659. .137219
/note="assembly_fragment clone_end:SP6 vector_side:left"
137320. .143276
                                                                                                                                                                                                                            0,
```

O C

C C C

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perfect score:
                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tal number of hits satisfying chosen parameters:
     10
9
8
8
                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                             score greater
   676
668
603
347.4
341.8
312.8
312.8
1190.4
1190.4
1108.8
1108.8
                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                             re greater than or equal to the score of the result bein is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | length:
| length:
                                                                                                                                                                                                         %
Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N_Geneseq_1101:*
1: /SIDS2/gcgdata
2: /SIDS2/gcgdata
3: /SIDS2/gcgdata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-735-712-9
676
                                                                                                                                                                                                                                                                                                            is the number of results predicted by chance to have ster than or equal to the score of the result being p
   100.0
98.8
89.2
51.4
50.6
46.3
36.4
28.2
116.1
116.1
                                                                                                                                                                                                                                                                                                                                                                   110:
111:
112:
113:
114:
115:
116:
117:
119:
120:
221:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     930621 segs, 428662619 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          November 29, 2001, 00:23:54; Search time 204.6 Seconds
                                                                                                                                                                                                                                                                                                                                                          /SIDS2/gcgdata/geneseq/geneseqn/NA198B.DAT: *
/SIDS2/gcgdata/geneseq/geneseqn/NA198D.DAT: *
/SIDS2/gcgdata/geneseq/geneseqn/NA199D.DAT: *
/SIDS2/gcgdata/geneseq/geneseqn/NA200D.DAT: *
/SIDS2/gcgdata/geneseq/geneseqn/NA200D.DAT: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /SIDS2/gcgdata/geneseq/geneseqn/NA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1982.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1984.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /SIDS2/gcgdata/geneseq/geneseqn/NA1985.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1987.DAT:*
                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000000000
   676
747
747
603
450
417
372
246
468
936
                                                                                                                                                                                                             DВ
                                                                                                                                                                                                             ij
   AAS04283
AAH64741
AAS04279
AAS04282
AAS04281
AAC03080
AAH64740
AAF58252
AAF58252
                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (without alignments)
2832.609 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1861242
Novel human membra
Human secreted pro
Novel human membra
Human secreted pro
Oligonucleotide D1
Oligonucleotide D1
Oligonucleotide D1
                                                                                                                                                                                                         Description
                                                                                                                                     DNA sequence encod
Human secreted pro
Novel human membra
                                                                                                                         Novel human membra
                                                                                                                                                                                                                                                                                                             printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           676
```

Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	12 13 14 15 16 17 18 19
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
12.8 9.3 9.3 9.3 9.3 9.3 9.3 9.3 9.3 8.1 8.1 7.8 8.1 7.8 8.1 7.8 8.1 7.8	16.1 16.1 16.1 16.1 16.1 16.1 16.1
1669 1660 1661 1708 1708 1708 1708 1708 1708 1709 1709 1709 1709 1709 1709 1709 1709	11 93 93 93 93 93 93 93 93 93 93 93 93 93
20 21 11 21 11 22 11 11 22 11 20 21 11 21 21 21 21 21 21 21 21 21 21 21	222222222222222222222222222222222222222
AAX15104 AAZ32842 AAT45120 AAY03875 AAZ76238 AAZ77624 AAZ714710 AAY012170 AAY01206 AAY01206 AAY01206 AAX14713 AAX60584 AAX60584 AAX60584 AAX60587 AAX714713 AAY14713 AAY14713 AAY14713 AAY14713 AAY14713 AAY14713 AAY163451 AAY63451 AAY630587 AAX79730 AAX50587 AAX50587 AAX50587 AAX650587	AAF58254 AAF58257 AAF58259 AAF58262 AAF58262 AAF58262 AAF58265 AAF58265 AAF58255
High affinity immu Human high affinity HTm4 gene. Homo s cDNA encoding a bo Murine wild-type F (Lone CD0.4 encod CD20.4 cDNA. AAN Human CD20.4 antig Human CD20.4 antig Human CD20.4 antig Human CD20.4 antigen Human CD20 antigen Human Secreted pro	nucleotid nucleotid nucleotid nucleotid nucleotid nucleotid nucleotid nucleotid

ALIGNMENTS

RESULT AAS04283 22-DEC-1999; 12-DEC-2000; 2000WO-US33742 28-JUN-2001. Human; membrane protein; membrane receptor; IgE receptor; CD20; physiological disorder; ds. DNA sequence encoding novel human membrane (LEXI-) LEXICON GENETICS INC WO200146417-A2 Homo sapiens. 26-SEP-2001 AAS04283; AAS04283 standard; DNA; 676 (first entry) 99us-0171567 ΒP protein

Polynucleotide encoding novel human membrane protein, useful for identifying agonist, antagonist or modifiers or for producing antibodies useful in therapeutic, diagnostic and pharmacogenomic

applications

WPI; 2001-408646/43.

Walke DW,

Turner CA;

```
Q
                                                                                                                             Db
                                                                                                                                                          δÃ
                                                                                                                                                                                             밁
                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                    QУ
                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                              γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                            8
                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence encoding for a novel human membrane protein includes the flanking 5'- and 3'- sequences. Four amino acid sequences for novel human membrane proteins (AMU01210-AAU01213) are given in the present invention. These membrane proteins share structural similarity with membrane receptors such as the IgE receptor and memmalian CD20. The novel human membrane proteins are useful for identifying agonist, antagonist and modulators of the membrane proteins, and for producing antibodies specific to the membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The polynucleotides encoding the membrane proteins can be used to generate PCR primers or probes to identify mutations associated ease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
661
                                                               601
                                                                                                                                                                                             481
                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 676; Conser
                                                                           actcagaggattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtg
                                                                                                                                                                                                                                                                                                                  cagaaactctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                               ttaaaataaaaaaaaa
                                                                                                                                           ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                                                                                                                                                                                        ctggaatcattctcctcacatttggtttcatcctagatcaaaactacatttgtggttatt
                                                                                                                                                                                                                                                                                                                                                                                                   9999ctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaacca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tagggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct
                                                            actcagaggattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtg
                                                                                                                                                                                          ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                                                                                                                                                                        ctggaatcattctcctcacatttggtttcatcctagatcaaaactacatttgtggttatt
                                                                                                                                                                                                                                                                                                                                                                                    ggggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaacca
                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                                                                                                                          tgatgactttcagcattattgaattattcatttctctgcctttctcaattttggggtgcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tagggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      particular disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; 140 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 676; DB 22;
Pred. No. 3.7e-174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

240

240

Gaps 60

60

RESULT

660

480 480 420

```
AAH64741
XX
AC AAHH
AC AAH
AC AAHH
AC AAHH
AC AAHH
AC A
                                                  δÃ
B
                                                                                                                밁
                                                                                                                                                                Ωy
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENSET gene expression by rectifying mutations or deletions in a patient's genome that affect the activity of GENSET or by supplementing the patients own production of GENSET polypeptides. Conversely, antisense nucleic acid molecules may be administered to down regulate GENSET expression by binding with the cells' own genes and preventing their expression. The sense and antisense nucleic acids may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acid sequences in samples, and hence to determine which patients may be in need of restorative therapy. The GENSET polypeptides may be used as antigens in the production of antibodies and in assays to identify modulators (agonists and antagonists) of GENSET polypeptide expression and activity. The present sequence is a GENSET nucleic acid of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to full length GENSET human nucleic acids encoding potentially secreted proteins. The nucleic acids and the polypeptides they encode may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate GENSET gene expression. For example, they be used to treat disorders associated with decreased
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety or diseases, and for diagnosis of those diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 7; Page 576-577; 921pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dumas Milne Edwards
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-DEC-1999; 99US-0169629
06-MAR-2000; 2000US-0187470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-DEC-2000; 2000WO-IB01938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAH64741 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14 -JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200142451-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENSET;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-SEP-2001
161
                                                        121
                                                                                                                101
                                                                                                                                                                         61
                                                                                                                                                                                                                                 41
                                                                                                                                                                                                                                                                                                                                            Local Similarity 99.3 nes 671; Conservative
                                                                                                    ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct
                                                                                                                                                                                                                                                                                       tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240 A; 145 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                    98.8%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bougueleret L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                            Score 668; DB 22;
Pred. No. 5.7e-172;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     therapy; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jobert
                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diagnosis;
                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                         Gaps
                                                     180
                                                                                                             160
                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                            0,
```

Ġ

밁 γ

181 221

241

```
RESULT
AAS04279
δÃ
                                                                                                                                                                                                                                                                                                                                                           ρy
                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                          늄
                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                             δÕ
                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
WPI; 2001-408646/43
P-PSDB; AAU01210.
                       Walke
                                                                   12-DEC-2000;
                                                                                                                                                                          physiological
                                                                                                                                                                                                   Novel
                                                                                                                                                                                                                 26-SEP-2001
                                                                                                                                                                                                                                               AAS04279 standard;
                                                                                                WO200146417-A2
                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                    701
                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                  641
                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                               581
                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                            521
                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                          461
                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                        401
                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                        ttaaaataaaaaaaaa
                                                                                                                                                                                                                                                                                                                        actcagaggattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtg
                                                                                                                                                                                                                                                                                                                                                      tgatgactttcagcattattgaattattcatttctctgcctttctcaatttttggggtgcc
                                                                                                                                                                                                                                                                                                                                                                           ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                                                                                                                                                                                                                                                                                                   ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                                                                                                                                                                                                                                                                                                                                                        cagaaactctgataatattgagccgaataatgaattttcttagtgccctgggagcaatag
                                                                                                                                                                                                                                                                                                                                                                                                                                                cagaaactctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatag
                                                                                                                                                                                                                                                                                                                 actcagaggattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtg
                                                                                                                                                                                                                                                                                                                                             tgatgactttcagcattattgaattattcatttctctgcctttctcaattttggggtgcc
                                                                                                                                                                                                 human
                       DW,
                                                                                                                                                                          membrane protein
logical disorder;
                                      LEXICON
                      Turner CA
                                                                   2000WO-US33742
                                                                                                                                                                                                                (first entry)
                                                    99US-0171567.
                                      GENETICS
                                                                                                                            Location/Qualifiers
1..603
/*tag= a
                                                                                                                                                                                 protein; membrane receptor;
                                                                                                              /*tag= a
/product= "Human membrane protein #1"
/transl_except= (pos:595..600,aa:Cys)
                                                                                                                                                                                                                                               cDNA;
                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                  676
                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                               ВP
                                                                                                                                                                                                 #1 cDNA sequence
                                                                                                                                                                                 IgE
                                                                                                                                                                                  receptor;
                                                                                                                                                                                   CD20;
                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                         460
                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      400
                                                                                                                                                                                                                                                                                                                                                                                                          520
                                                                                                                                                                                                                                                                                                                 700
                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                              640
                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                           580
                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
```

```
The present sequence encodes for novel human membrane protein #1. Human membrane protein #1 is 1 of 4 human membrane proteins (AAU01210-AAU01213) given in the present invention. These membrane proteins share structural similarity with membrane receptors such as the IgE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonists, antagonists and modulators of the membrane proteins, and for producing antibodies specific to the membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The per polynucleotides encoding the membrane proteins can be used to generate pCR primers or probes to identify mutations associated with a particular disease.
                                                                                                                                                                                                                                                                                                                                                                    Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                    Polynucleotide encoding novel human membrane identifying agonist, antagonist or modifiers antibodies useful in therapeutic, diagnostic applications
                                                                                                                                                                                                                                                                                                                                                                                                               applications
                                                                                                                                                                                                                                                                                                                                                                    Page 29;
                                                                                                                                                                                                                                                                                                                                                             32pp;
                                                                                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                               protein, useful for or for producing and pharmacogenomic
```

Sequence 603 ₽P; 162 A; 125 Ç 104 ç, 212 Τ; 0 other;

Similarity

Score 603; DB 22; 1 Pred. No. 2.4e-154;

Length

603;

particular

```
δõ
                       В
                                       Qy
                                                                           Qy
                                                                                                 Вþ
                                                                                                                 δ
                                                                                                                                      Дb
                                                                                                                                                        δÃ
                                                                                                                                                                            밁
                                                                                                                                                                                             QY
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                        ф
                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                ρ
                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                           В
                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 603
      633
                       541
                                         573
                                                           481
                                                                              513
                                                                                                 421
                                                                                                                    453
                                                                                                                                       361
                                                                                                                                                          393
                                                                                                                                                                             301
                                                                                                                                                                                                333
                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                           213
                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                  153
                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                      93
                                                                                                                                                                                                                                                                                                                                                                                          33
                                                                                                                                                                                                                                                       gtcctgttcttgggaattttgattacattgatgactttcagcattattgaattattcatt
    tga
                                                           gtcctgttcttgggaattttgattacattgatgactttcagcattattgaattattcatt
                                                                                                ctagatcaaaactacatttgtggttattctcaccaaaatagtcagtgtaaggctgttact
                                                                                                         ctagatcaaaactacatttgtggttattctcaccaaaatagtcagtgtaaggctgttact
                                                                                                                                              aatcttcttagtgccctgagagcaatagctggaatcattctcctcacattttggtttcatc
                                                                                                                                                                                     ttcctaattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatg
                                                                                                                                                                                                                 tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                            tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                             tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                     aatcttcttagtgccctgagagcaatagctggaatcattctcctcacatttggtttcatc
                                                                                                                                                                           ttcctaattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatg
                                                                                                                                                                                                                                                                                                                                   tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                                                                                                                                                                                                              603;
     635
                                                                                                                                                                                                                                                                                                                                                                                                             89.2%; llarity 100.0%; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                 480
                                                                                                                    512
                                                                                                                                                          452
                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                        60
                                                           540
                                                                                                                                       420
                                                                                                                                                                                                392
                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                 212
                                                                                                                                                                                                                                     332
                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

밁

601

tga

```
ρ
                              밁
                                                      Ş
                                                                                    밁
                                                                                                          ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAS04282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                             The present sequence encodes for novel human membrane protein #4. Human membrane protein #4 is 1 of 4 human membrane proteins (AAU01210-AAU01213) given in the present invention. These membrane proteins share structural similarity with membrane receptors such as the IgE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonists, antagonists and modulators of the membrane proteins, and for producing antibodies specific to the membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The polynucleotides encoding the membrane proteins can be used to generate polynucleotides encoding the membrane proteins can be used to generate
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polynucleotide encoding novel human membrane protein, useful for identifying agonist, antagonist or modifiers or for producing antibodies useful in therapeutic, diagnostic and pharmacogenomic applications
                                                                                                                                                                                                          Sequence 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  physiological
                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200146417-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel human membrane protein #4 cDNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAS04282;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAS04282 standard; cDNA; 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-SEP-2001
  153
                                                                                                              33
                                                                                                                                                      Local Similarity
                              61
                                                        93
                                                                                    L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                atggattcaagcaccgcacaggtccggtgtttctggtatttcctccagaaatcactgct 92
aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                      tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                 atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-408646/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU01213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Turner CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 31;
                                                                                                                                        Conservative
                                                                                                                                                                                                          BP; 120 A; 94 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000WO-US33742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ne protein; membrane receptor; IgE
disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0171567.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 1..450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                     51.4%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                32pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Human membrane protein
                                                                                                                                        0;
                                                                                                                                                     Score 347.4; DB: Pred. No. 5.9e-85
                                                                                                                                                                                                           77
                                                                                                                                         Mismatches
                                                                                                                                                                                                          G;
                                                                                                                                                                                                          159 T; 0 other;
                                                                                                                                                                DB 22;
                                                                                                                                        11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 receptor; CD20;
                                                                                                                                       Indels
                                                                                                                                                                  Length
                                                                                                                                                                450;
                                                                                                                                        0
                                                                                                                                                                                                                                               generate
particular
                                                                                                                                     Gaps
                                                                                   60
                                                                                                                                        0
```

```
RESULT
AAS04281
ID AAS
Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                              Polynucleotide encoding novel human membrane protein, useful for identifying agonist, antagonist or modifiers or for producing antibodies useful in therapeutic, diagnostic and pharmacogenomic
                                                                                                                   Disclosure;
                                                                                                                                                                                        WPI; 2001-408646/43.
P-PSDB; AAU01212.
                                                                                                                                                                                                                     Walke
                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                            Human; membrane protein; me physiological disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAS04281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAS04281 standard; cDNA;
                                                                                                                                       applications
                                                                                                                                                                                                                                        (LEXI-) LEXICON GENETICS
                                                                                                                                                                                                                                                           22-DEC-1999;
                                                                                                                                                                                                                                                                              12-DEC-2000; 2000WO-US33742
                                                                                                                                                                                                                                                                                                  28-JUN-2001.
                                                                                                                                                                                                                                                                                                                      WO200146417-A2
                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel human membrane protein #3 cDNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 acttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aatct 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttcctaattgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tttätatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ttcctaattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Turner
                                                                                                                   Page 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                           99US-0171567
                                                                                                                                                                                                                                                                                                                                                                                                                     protein; membrane receptor; IgE receptor; CD20;
                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers 1..417
                                                                                                                                                                                                                                                                                                                                       /*tag= a
/product= "Human membrane protein
                                                                                                                  32pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   417
                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
```

The present sequence encodes for novel human membrane protein #3. Human membrane protein #3 is 1 of 4 human membrane proteins (AAU01210-AAU01213) given in the present invention. These membrane proteins share structural similarity with membrane receptors such as the IgE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonists, antagonists and modulators of the membrane proteins, and for producing antibodies specific to the membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The

encoding

membrane

can

monitoring generate

```
RESULT
AACC3080
ID AACC
XX
AC AACC
XX
XX
DE Huma
XX
KW Huma
KW gene
XX
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γ
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85 8 8
8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 343; Conserv
 The present sequence is mRNAs encoding secreted
                             Claim 1; SEQ
                                              New nucleic acid that is a 5' expressed sequence obtaining cDNAs and genomic DNAs that correspond diagnostic, forensic, gene therapy and chromosome
                                                                                                                    Dumas Milne Edwards
                                                                                                                                                                             21-FEB-2000; 2000EP-0200610
                                                                                                                                                                                                 06-SEP-2000
                                                                                                                                                                                                                    EP1033401-A2
                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                       Human secreted
                                                                                                                                                                                                                                                                                                                                                 AAC03080 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            disease
                                                                                        P-PSDB;
                                                                                                                                                           26-FEB-1999;
                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                   Human;
                                                                                                                                                                                                                                                                                                           06-OCT-2000
                                                                                                                                                                                                                                                                                                                               AAC03080;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCR primers
                                                                                                                                      (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                    333
                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                           273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _
                                                                                                                                                                                                                                                                                                                                                                     6
                                                                                       2000-500381/45
DB; AAG03074.
                                                                                                                                                                                                                                                         therapy;
                                                                                                                                                                                                                                                                                                                                                                                               ttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               atggattcaagcaccgcacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                      tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                    ń
                                                                                                                                                                                                                                                                  EST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                          (first entry)
                            ID 3078; 71pp + CD-ROM; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP;
                                                                                                                                                                                                                                                          chromosome
                                                                                                                                                           9905-0122487
                                                                                                                                                                                                                                                                                       protein 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115
                                                                                                                                                                                                                                                                                                                                                 cDNA;
                                                                                                                    'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
one of a large number of 5' ESTs derived proteins. An ORF has been identified with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91
                                                                                                                    Duclert A,
                                                                                                                                                                                                                                                        sequence
mapping;
                                                                                                                                                                                                                                                                                                                                                 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      identify mutations associated with a
                                                                                                                                                                                                                                                                                       EST,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                 ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 341.8;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69 G;
                                                                                                                                                                                                                                                                                       SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                          tag;
                                                                                                                                                                                                                                                                                       H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         142
                                                                                                                    Giordano
                                                                                                                                                                                                                                                                                        NO: 3078.
                                                                                                                                                                                                                                                                   secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Τ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .9e-83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
                                                                                                                    ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;.
                                               e tag (5' EST)
d to 5'ESTs and
ne mapping proc
                                                                                                                                                                                                                                                                   protein; cDNA isolation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    377
                                                                                                                                                                                                                                                                                                                                                                                                  345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                               s and for procedures
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      particular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                          332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

within the

22-DEC-1999;

99US-0171567

```
RESULT
AAS04280
дЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                      QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                       IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNAs and even in those cases where longer cDNA sequences have been obtained, the full 5 'UTR is rarely included. 5 'ESTs are derived from mRNAs with intact 5' ends and can therefore be used to obtain full length cDNAs and genomic DNAs. 5' ESTs are also used in diagnostic, forensic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence. The 5' ESTs were prepared from total human RNAs or polyA+ RN derived from 30 different tissues. EST sequences usually correspond mainly to the 3' untranslated region (UTR) of the mRNA because they a often obtained from oligo-dT primed cDNA libraries. Such ESTs are not well suited for isolating cDNA sequences derived from the 5' ends of
                                                                                                                                                                                  Human; membrane protein; membrane receptor; IgE receptor; CD20;
physiological disorder; ss.
                                                                                                                                                                                                                                                                 AAS04280;
                                                                                                                                                                                                                                                                                         AAS04280 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 372 BP; 105
                               12-DEC-2000; 2000WO-US33742.
                                                                             WO200146417-A2
                                                                                                                                                              Homo
                                                                                                                                                                                 physiological
                                                                                                                                                                                                                    Novel human
                                                                                                                                                                                                                                            26-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene therapy and chromosome mapping procedures. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            upstream regulatory sequences and to design expression and secretion
                                                                                                                                                                                                                                                                                                                                                   341
                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ccacgacctttccaactcaaagccccttgc-aaaaattatttgctagaaaaatgaaaatc
                                                                                                                                                                                                                                                                                                                                                             tggggctctgttttgttcattaattctggagc 331
                                                                                                                                                                                                                                                                                                                                                                                                           ttagggactatccagatcctgtttggaattatgaccttttctttttggagttatcttcctt
                                                                                                                                                                                                                                                                                                                                                 tggggctctgttttgttcattaattctggagc 372
                                                                                                                                                                                                                                                                                                                                                                                               ttmaccttgtndaaaccatatccaaggtttccctttatatttctttcanratatccattc
                                                                                                                                                                                                                                                                                                                                                                                                                                             ttagggactatccagawcctgtttggaattatgnccttttcttttggagttatcttcctt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ccacgaccttttcaactcaaagccccttgcaaaaaattatttgctagaaaaatgaaaatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                   membrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                          (first entry)
                                                                                                   /product=
                                                                                                              /*tag=
                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                       cDNA; 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            87 C;
                                                                                                   "Human membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                   #2 cDNA sequence.
                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 312.8;
Pred. No. 1.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            117 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.4e-75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          are used to obtain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        372;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                               340
                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                             280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         are
```

۲,

Of.

```
AAH64745
IID AAH6
XX
AC AAH6
AC AAH6
AX
DT 11-S
XX
XX
DT U11-S
XX
XX
XX
Huma
XX
KW Huma
KW GENS
XX
XX
XX
BY
OS HOMO
XX
PN WO20
                                                                                                                                                                                                                                                                                                                                                                                                             뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence encodes for novel human membrane protein #2. Human membrane protein #2 is 1 of 4 human membrane proteins (AAU01210-AAU01213) given in the present invention. These membrane proteins share structural similarity with membrane receptors such as the 1gE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonists, antagonists and modulators of the membrane proteins, and for producing antibodies specific to the drug screening, harmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The polynucleotides encoding the membrane proteins can be used to generate polynucleotides encoding the membrane proteins can be used to generate polynucleotides encoding the membrane proteins can be used to generate polynucleotides on probes to identify mutations associated with a particular disease.
              WO200142451-A2
                                                                                                                  Human secreted protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  identifying agonist, antibodies useful in
                                          Homo sapiens
                                                                                                                                                                               AAH64745;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 30;
                                                                                     Human;
                                                                                                                                                 11-SEP-2001
                                                                                                                                                                                                           AAH64745 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       apprications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polynucleotide encoding novel human membrane protein, useful for identifying agonist, antagonist or modifiers or for producing antibodies useful in therapeutic, diagnostic and pharmacogenomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB;
                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                  630
                                                                                                                                                                                                                                                                                                                                                                             570
                                                                                                                                                                                                                                                                                                                                                                                                                                       510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (LEXI-) LEXICON GENETICS
                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
les 246; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                         actgtcctgttcttgggaattttgattacattgatgactttcagcattattgaattattc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tgttga 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atcctagatcaaaactacatttgtggttattctcaccaaaatagtcagtgtaaggctgtt 509
                                                                                                                                                                                                                                                                                                                                              atttctctgcctttctcaattttggggtgccactcagaggattgtgattgtgaacaatgt
                                                                                                                                                                                                                                                                                                                                                            atttotctgcctttotcaattttggggtgccactcagaggattgtgattgtgaacaatgt 629
                                                                                                                                                                                                                                                                                                                                                                                                        actgtcctgttcttgggaattttgattacattgatgactttcagcattattgaattattc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  atcctagatcaaaactacatttgtggttattctcaccaaaatagtcagtgtaaggctgtt 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-408646/43.
DB; AAU01211.
                                                                                     secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Turner CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36.4%;
ilarity 100.0%;
Conservative
                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP;
                                                                                  protein; gene therapy; vaccine; treatment; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45
                                                                                                                   CDNA,
                                                                                                                                                                                                            468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 246; DB; Pred. No. 1.7
0; Mismatches
                                                                                                                   SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47 G;
                                                                                                                   Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94
                                                                                                                     .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 22; L. 1.7e-57; 0;
                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 246;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                      569
                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
RESULT
AAF58252
ID AAF5
XX
AC AAF5
XX
                                                                                                                                 망
                                                                                                                                                               QУ
                                                                                                                                                                                                    В
                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                   Dр
                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                     QY
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diseases associated with inappropriate GENSET gene expression. For cexample, they be used to treat disorders associated with decreased GENSET gene expression by rectifying mutations or deletions in a patient's genome that affect the activity of GENSET or by supplementing the patients own production of GENSET polypeptides. Conversely, antisense nucleic acid molecules may be administered to down regulate GENSET expression by binding with the cells' own genes and preventing their expression. The sense and antisense nucleic acids may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acid sequences in samples, and hence to determine which patients may be in need of restorative therapy. The GENSET polypeptides may be used as antigens in the production of antibodies and in assays to identify modulators (agonists and antagonists) of GENSET polypeptide expression and activity. The present sequence is a GENSET nucleic acid of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 230; Conserv
                                               AAF58252 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to full length GENSET human nucleic acids encoding potentially secreted proteins. The nucleic acids and the polypeptides they encode may be used in the prevention, treatment and diagnosis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 7; Page 581; 921pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety or diseases, and for diagnosis of those diseases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dumas Milne Edwards
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-DEC-1999;
06-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-JUN-2001
                                                                                                                                 284
                                                                                                                                                                  241
                                                                                                                                                                                                    224
                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                    164
                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                       104
                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                         44
                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                      | teateteettteaaattateaeegaeaeeateatggatteaageaeeggeaeaeagteegg
                                                                                                                               agtgaaaagaaaaccacagaaactctgggaattttgattacattgatgactttca
                                                                                                                                                                                                                   tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 163
                                                                                                                                                                                                                                                                                                                                                     tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag
                                                                                                                                                                                                                                                                                                                                                                                                      tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg 103
                                                                                                                                                                                                                                                                   ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct
                                                                                                                                                               2001-367870/38
DB; AAG89142.
                                                                                                                                                                                                taggggatatccattctggggctctgttttgttcattaattctggagccttcctaattgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP; 155 A; 94 C; 81 G; 138 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0169629
2000US-0187470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-IB01938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28.2%;
                                               936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bougueleret L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 190.4;
Pred. No. 2.7e
0; Mismatches
                                               ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jobert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .7e-42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 468;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                    223
                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                     120
```

24-APR-2001

(first entry)

```
ДЬ
                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                            망
 Ş
                      Вb
                                      Ş
                                                              밁
                                                                                  Ş
                                                                                                        B
                                                                                                                         δÃ
                                                                                                                                                Дb
                                                                                                                                                                    ρ
                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                          SXCCCCCCXXXX PTIXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to a composition comprising two nucleic acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nucleic acids containing electron-transfer group, useful as labels in hybridization assays, e.g. for genotyping, allowing repeat analyses on a single surface \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Umek RM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                         Sequence 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 6; Page 127; 159pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CLIN-) CLINICAL MICRO SENSORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-JUL-1999;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-JUL-2000; 2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200107665-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Electron-transfer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oligonucleotide D1835
                                                                                                                                                                                                                                                                                                                                                                                             monitoring gene expression.
  429
                      419
                                          369
                                                               359
                                                                                   309
                                                                                                         299
                                                                                                                             249
                                                                                                                                                  239
                                                                                                                                                                       189
                                                                                                                                                                                           179
                                                                                                                                                                                                               129
                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                             59
                                                                                                                                                                                                                                                                                                                     Local Similarity
nes 5; Conserv
attctcctcacatttggtttcatcctagatcaaaactacatttgtggttattctcaccaa
                                                                        gttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaaact
                                                                                                                   ttaaaaccatatccaaggtttccctttatatttctttcaggatatccattctggggctct
                                                                                                                                                                                                                                   expression;
                                       ctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaatc
                                                           atccagatcctgtttggaattatgaccttttcttttggagttatcttccttttcaccttg
                                                                                                                                                                                          tttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggact
                                                                                                                                                                                                                                                                            Conservative 418;
                                                                                                                                                                                                                                                                                                                                                                        BP; 4 A; 139 C; 10 G; 7 T; 776 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0190259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0145695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              group;
                                                                                                                                                                                                                                                                                                                              16.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETM; mismatch; genotyping;
                                                                                                                                                                                                                                                                                                                                Score 108.8;
Pred. No. 5.1e
                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                .1e-20
                                                                                                                                                                                                                                                                                                                                          DB 22;
                                                                                                                                                                                                                                                                                                                     245;
                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                          936;
                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                    Gaps
                                         428
                                                              418
                                                                                   368
                                                                                                                            308
                                                                                                                                                                    248
                                                                                                                                                                                          238
                                                                                                                                                                                                              188
                                                                                                                                                                                                                                                                            118
                                                                                                                                                                                                                                                                                                89
                                                                                                       358
                                                                                                                                                 298
                                                                                                                                                                                                                                                                                                                     0;
```

```
RESULT 1
AAF58252/
맑
                 Qy
                                                                                           Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                       Query Match
Best Local S
Matches 5
                                                                                                              The present invention relates to a composition comprising two nucleic acids each containing an electron-transfer group (FTM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping, monitoring gene expression.
                                                                                                                                                                                                             a single surface
                                                                                                                                                                                                                                                                          Umek
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oligonucleotide D1835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF58252;
                                                                                           Sequence 936 BP; 4 A; 139 C; 10 G;
                                                                                                                                                                                       Example 6; Page 127; 159pp; English.
                                                                                                                                                                                                                Nucleic acids containing electron-transfer hybridization assays, e.g. for genotyping, a single surface
                                                                                                                                                                                                                                                     WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                   26-JUL-1999;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                      01-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                           WO200107665-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                             Electron-transfer group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAF58252 standard;
                                                                                                                                                                                                                                                                                                                                                 26-JUL-2000;
                                                                                                                                                                                                                                                                                              (CLIN-) CLINICAL MICRO SENSORS
729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    719 wwwwwwww
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
2/c
                   9
expression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccggtgtttctg 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        aaaaaaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtgttaaaata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ttcagcattattgaattattcatttctctgcctttctcaattttggggtgccactcagag 608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacattgatgact 548
                                       Similarity
5; Conser
                                       Conservative
                                                                                                                                                                                                                                                                                                                  99US-0145695
2000US-0190259
                                                                                                                                                                                                                                                                                                                                                 2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                      SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                      16.1%; Score 108.8; 0.7%; Pred. No. 5.1e. tive 418; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 936
                                                                                                                                                                                                                                                                                                                                                                                                                                               ETM; mismatch;
                                                                                                                                                                                                                                                                                               INC
                                                                                           7 T;
                                                8; DB
.1e-20;
                                                                                           776 other
                                                                                                                                                                                                                                                                                                                                                                                                                                              genotyping;
                                                                                                                                                                                                                     group, useful as labels in allowing repeat analyses on
                                       245;
                                                           22;
                                                           Length
                                       0;
                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          538
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                      рЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                            δã
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                 ρy
                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ф
                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                              01-FEB-2001
                                                                                                                                                             Oligonucleotide D1875
Umek RM
                                  26-JUL-1999;
17-MAR-2000;
                                                                                                                  Synthetic
                                                                                                                                   gene expression;
                                                                                                                                          Electron-transfer group;
                                                                                                                                                                                               AAF58254;
                                                                                                                                                                                                                AAF58254 standard; DNA; 936
                                                                                                WO200107665-A2
                                                                                                                                                                               24-APR-2001
                (CLIN-) CLINICAL
                                                             26-JUL-2000; 2000WO-US20476
                                                                                                                                                                                                                                                                              669
                                                                                                                                                                                                                                                                                                                                                                                    489
                                                                                                                                                                                                                                                                                                                                                                                                                       429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 549
                                                                                                                                                                                                                                                                                               129
                                                                                                                                                                                                                                                                                                                                  189
                                                                                                                                                                                                                                                                                                                                                   549
                                                                                                                                                                                                                                                                                                                                                                                                                                         369
                                                                                                                                                                                                                                                                                                                                                                                                                                                          369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189
                                                                                                                                                                                                                                                                                                                 609
                                                                                                                                                                                                                                                                                                                                                                    249
                                                                                                                                                                                                                                                                                                                                                                                                       309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   609
                                                                                                                                                                                                                                                             69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     669
                                                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                            ИМИМИМИМ 62
                                                                                                                                                                                                                                                                             aaaaaaaa 676
                                                                                                                                                                                                                                                                                                          gattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtgttaaaata
                                                                                                                                                                                                                                                                                                                                                                                  aatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacattgatgact 548
                                                                                                                                                                                                                                                                                                                                                                                                              attotoctcacatttggtttcatcctagatcaaaactacatttgtggttattctcaccaa
                                                                                                                                                                                                                                                                                                                                                                                                                                       gttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaact 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ttcagcattattgaattattcatttctctgcctttctcaattttggggtgccactcagag 608
                                                                                                                                                                                                                                                                                                                                                                                                     ctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaatc 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ttaaaaccatatccaaggtttccctttatatttctttcaggatatccattctggggctct 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              atccagatcctgtttggaattatgaccttttcttttggagttatcttccttttcaccttg
                                                                                                                                                                                                                                                                                                                                                                   ttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcagccacgacc
                                   2000US-0190259.
                                                                                                                                                                             (first entry)
                                           99US-0145695
                                                                                                                                    SS.
                 MICRO SENSORS
                                                                                                                                          ETM; mismatch; genotyping;
                                                                                                                                                                                                                 ВP
                 INC
                                                                                                                                                                                                                                                                                                                                                                                                                      488
                                                                                                                                                                                                                                                                                                                                                                                                                                      310
                                                                                                                                                                                                                                                                                                               899
                                                                                                                                                                                                                                                                                              70
                                                                                                                                                                                                                                                                                                                                                                                                     250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 550
```

```
밁
                                                                   Š
                                                                                             밁
                                                                                                                   Q
                                                                                                                                            밁
                                                                                                                                                                 Qy
                                                                                                                                                                                          В
                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SXCCCCCXXXX PTTXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention relates to a composition comprising two nucleotise each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatch and single-nucleotide polymorphisms, e.g. for genotyping, monditorios compositions).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a single surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic acids containing electron-transfer group, useful as labels in hybridization assays, e.g. for genotyping, allowing repeat analyses on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               monitoring gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 6; Page 127; 159pp; English.
                       669
                                               659
                                                                                             599
                                                                                                                     549
                                                                                                                                                                  489
                                                                                                                                                                                           479
                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                          419
719
                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                        359
                                                                                                                                                                                                                                                                                                                309
                                                                                                                                                                                                                                                                                                                                        299
                                                                                                                                                                                                                                                                                                                                                              249
                                                                                                                                                                                                                                                                                                                                                                                      239
                                                                                                                                                                                                                                                                                                                                                                                                             189
                                                                                                                                                                                                                                                                                                                                                                                                                                     179
                                                                                                                                                                                                                                                                                                                                                                                                                                                           129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
WWWWWWW
                      aaaaaaaa 676
                                               gattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtgttaaaata
                                                                                             aatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacattgatgact
                                                                                                                                                                                          attetecteacatttggtttcatectagateaaaactacatttgtggttatteteaceaa
                                                                                                                                                                                                                                                              ctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaatc
                                                                                                                                                                                                                                                                                      พพพพพพพพพพพพพพพพพพพพพพพพพพพพ gcttawwwwwwwwwwwwwwwwwwww
                                                                                                                                                                                                                                                                                                  gttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaact
                                                                                                                                                                                                                                                                                                                                     ttaaaaccatatccaaggtttccctttatatttctttcaggatatccattctggggctct
                                                                                                                                                                                                                                                                                                                                                                                     ttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggact 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccggtgtttctg
                                                                                                                  ttcagcattattgaattattcatttctctgcctttctcaattttggggtgccactcagag
                                                                                                                                                                                                                                         atccagatcctgtttggaattatgaccttttcttttggagttatcttccttttcaccttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcagccacgacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         вP;
726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        144 C; 7 G; 5 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 108.8;
Pred. No. 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       776 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .1e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          substitutions (mismatches)
for genotyping,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    936;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                              718
                                                                    668
                                                                                            658
                                                                                                                                           598
                                                                                                                                                                  548
                                                                                                                                                                                                                 488
                                                                                                                                                                                                                                         478
                                                                                                                                                                                                                                                               428
                                                                                                                                                                                                                                                                                       418
                                                                                                                                                                                                                                                                                                               368
                                                                                                                                                                                                                                                                                                                                     358
                                                                                                                                                                                                                                                                                                                                                             308
                                                                                                                                                                                                                                                                                                                                                                                     298
                                                                                                                                                                                                                                                                                                                                                                                                           248
                                                                                                                                                                                                                                                                                                                                                                                                                                   238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                          538
```

0,

RESULT

```
γQ
                                                                        망
В
                Š
                                    В
                                                                                         δÃ
                                                                                                              DЬ
                                                                                                                              Ş
                                                                                                                                                    밁
                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S X F X B
                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                    The present invention relates to a composition comprising two nucleic acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping,
                                                                                                                                                                                                                                                                                                                                                                                Nucleic acids containing electron-transfer hybridization assays, e.g. for genotyping, a single surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-JUL-1999;
17-MAR-2000;
                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                         Umek RM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Electron-transfer group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oligonucleotide D1875
                                                                                                                                                                                                                                                                                              monitoring gene
                                                                                                                                                                                                                                                                                                                                                               Example 6; Page 127; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           (CLIN-) CLINICAL MICRO SENSORS
429
                                                                         549
                                                                                                               609
                  309
                                    489
                                                       249
                                                                                            189
                                                                                                                                 129
                                                                                                                                                    669
                                                                                                                                                                                        729
                                                                                                                                                                     69
                                                                                                                                                                                                           9
gttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaact
                                                     ttaaaaaccatatccaaggtttccctttatatttctttcaggatatccattctggggctct
                                                                         atccagatcctgtttggaattatgaccttttcttttggagttatcttccttttcaccttg
                                                                                                              ttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggact
                                                                                                                                                   gtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcagccacgacc 128
                                                                                                                                                                                                 Similarity
5; Conserv
                                                                                                                                                                                                                                                                           936 BP; 4 A; 144 C; 7
                                                                                                                                                                                                                            ilarity 0.7%; Pred. Conservative 418; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-0145695.
2000US-0190259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                              expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                     16.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ETM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                                                                                                                      Score 108.8;
Pred. No. 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mismatch; genotyping;
                                                                                                                                                                                                                                                                           <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                            INC.
                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                     No.
                                                                                                                                                                                                                                                                           Τ;
                                                                                                                                                                                                                                                                            776
                                                                                                                                                                                                                                     8; DB
.1e-20;
                                                                                                                                                                                                                                                                                                                                                                                         group, useful as labels in allowing repeat analyses on
                                                                                                                                                                                                                                                                            other,
                                                                                                                                                                                                                             245;
                                                                                                                                                                                                                                              22;
                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                              936;
                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                        670
370
                                   430
                                                      308
                                                                         490
                                                                                           248
                                                                                                              550
                                                                                                                               188
                                                                                                                                                  610
                                                                                                                                                                                                          89
                                                                                                                                                                                                                            0
```

```
RESULT 13
AAF58257
ID AAF582
XX
AC AAF582
XX
AC AAF582
DT 24-AP)
XX Oligo
XX Elect
XX gene
XX Gene
XX WO2(
PN WO2(
PN WO2(
PN WO2(
PN WO2(
PF 26-
XX DF 17
XX DF 17
XX DF 17
XX OLIGO
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                     The present invention relates to a composition comprising two nucleic acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping,
       Sequence
                                                                                                                                                                                                                                                                           Nucleic acids containing electron-transfer hybridization assays, e.g. for genotyping, a single surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Electron-transfer group; gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oligonucleotide D1954
                                                                                                                                                                                                                    Example 6;
                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200107665-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF58257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF58257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-JUL-1999;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CLIN-) CLINICAL MICRO SENSORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     369
                                                                                                                                                                                                                                                                   single surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69
                                                 single-nucleotide polymorphisms, itoring gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MMMMMMM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aaaaaaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtgttaaaata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ttcagcattattgaattattcatttctctgcctttctcaattttggggtgccactcagag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacattgatgact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    attetecteacatttggttteateetagateaaaaetaeatttgtggttatteteaceaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                    Page 127; 159pp; English.
       вр;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0145695.
2000US-0190259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                676
       σ
       ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
       142 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ETM; mismatch; genotyping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВP
       7
    <u>ც</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                              INC
       σ
       Τ.
       776
                                                                                                                                                                                                                                                                                       group, useful as labels in allowing repeat analyses on
       other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      310
```

Query Match Best Local Similarity

16.1%; 0.7%;

Score 100 Pred. No.

108.8;

08.8; DB . 5.1e-20;

22;

Length 936;

in

```
RESULT 14
AAF58257/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
  26-JUL-1999;
                        26-JUL-2000; 2000WO-US20476
                                               01-FEB-2001.
                                                                                           Synthetic
                                                                                                               gene expression;
                                                                                                                                                Oligonucleotide D1954
                                                                                                                                                                                                                   AAF58257 standard;
                                                                     WO200107665-A2
                                                                                                                         Electron-transfer group; ETM; mismatch; genotyping;
                                                                                                                                                                        24-APR-2001
                                                                                                                                                                                                                                                                         719 wwwwwww 726
                                                                                                                                                                                                                                                                                                 669
                                                                                                                                                                                                                                                                                                                       659
                                                                                                                                                                                                                                                                                                                                                                    599
                                                                                                                                                                                                                                                                                                                                                                                          549
                                                                                                                                                                                                                                                                                                                                                                                                               539
                                                                                                                                                                                                                                                                                                                                                                                                                                    489
                                                                                                                                                                                                                                                                                                                                                                                                                                                         479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                              aaaaaaaa 676
                                                                                                                                                                                                                                                                                                                                ttaaaaccatatccaaggtttccctttatatttctttcaggatatccattctggggctct 308
                                                                                                                                                                                                                                                                                                                     ttoagcattattgaattattcatttctctgcctttctcaattttggggtgccactcagag
                                                                                                                                                                                                                                                                                                                                                                                                                          attctcctcacatttggtttcatcctagatcaaaactacatttgtggttattctcaccaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggact 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaatc 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             www.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         atccagatcctgtttggaattatgaccttttcttttggagttatcttccttttcaccttg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccggtgtttctg 68
                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
  99US-0145695
                                                                                                                 SS
                                                                                                                                                                                                                   DNA;
                                                                                                                                                                                                                   936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     418;
                                                                                                                                                                                                                   ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           248
                                                                                                                                                                                                                                                                                                                                           899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             488
                                                                                                                                                                                                                                                                                                                                                                                        608
                                                                                                                                                                                                                                                                                                                                                                                                                                  548
                                                                                                                                                                                                                                                                                                                                                                                                                                                        538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                 658
                                                                                                                                                                                                                                                                                                                                                                                                             598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
Ş
                      밁
                                           Ş
                                                                 Дb
                                                                                     δõ
                                                                                                             밁
                                                                                                                                 δÃ
                                                                                                                                                       B
                                                                                                                                                                           Qy
                                                                                                                                                                                                     В
                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                          Вþ
                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 936 BP; 5 A; 142 C; 7 G; 6 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 6; Page 127; 159pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic acids containing electron-transfer group, useful as labels hybridization assays, e.g. for genotyping, allowing repeat analyses a single surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   monitoring gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CLIN-)
669
                      129
                                                                                      549
                                                                                                             249
                                                                                                                                  489
                                                                                                                                                         309
                                                                                                                                                                                                      369
                                                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                                                        309
                                                                                                                                                                                                                                                                                              489
                                                                                                                                                                                                                                                                                                                                           549
                                                                                                                                                                                                                                                                                                                                                                 189
                                                                                                                                                                                                                                                                                                                                                                                        609
                                                                                                                                                                                                                                                                                                                                                                                                            129
                                                                  189
                                                                                                                                                                                                                           369
                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                  669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            729
                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present invention relates to a composition comprising
                      gattgtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtgttaaaata
                                                               ttcagcattattgaattattcatttctctgcctttctcaattttggggtgccactcagag
                                                                                                             aatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacattgatgact
                                                                                                                                                        attctcctcacatttggtttcatcctagatcaaaactacatttgtggttattctcaccaa 488
                                                                                                                                                                                                    ctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaatc
                                                                                                                                                                                                                                               WWW.WWW.WWW.WWW.WWW.WWW.WW.WW.T.A.G.C.WW.WWW.WW.WW.WW.WW.WW.WW.WW.WW.
                                                                                                                                                                                                                                                                   gttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaact
                                                                                                                                                                                                                                                                                            ttaaaaccatatccaaggtttccctttatatttctttcaggatatccattctggggctct
                                                                                                                                                                                                                                                                                                                                         atccagatcctgtttggaattatgaccttttcttttggagttatcttccttttcaccttg
                                                                                                                                                                                                                                                                                                                                                                                     ttttcaactcaaagccccttgcaaaattatttgctagaaaatgaaaatcttagggact
                                                                                                                                                                                                                                                                                                                                                                                                                                 tttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccggtgtttctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLINICAL MICRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative 418; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0190259
676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16.18;
0.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SENSORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 108.8;
Pred. No. 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          776 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8; DB 22;
.1e-20;
hes 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            936;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

248

188

670 8

0

Q

밁 Qy 문 δÃ В δÃ 밁 δÃ 밁 δÃ Ş 밁 Qγ 멍 Q В Ş 밁 Ş

Ş В

190

548 250 428 370 368 430 308 490

309

밁

69 WWWWWWWWW

62

AAF58259 standard; DNA;

936 ВP

```
ARESULT 15
AAF58259
ID AAF582
XX AAF582
XX AAF582
XX 24-APR
XX 21ectr
XX Electr
XX Synthe
XX I CLIN-
XX Umek R
XX Official
PT Nuclei
PT hybrid
PT hybrid
PT a sing
XX Exampl
XX Exampl
XX Exampl
XX Exampl
XX Grids
CC The pr
CC detect
CC detect
CC detect
CC detect
CC dend si
CC monito
XX Sequen
밁
                          Š
                                                         В
                                                                                    Š
                                                                                                                   밁
                                                                                                                                              Š
                                                                                                                                                                             В
                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to a composition comprising two nucleic acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping, monitoring gene expression.
                                                                                                                                                                                                                                                                                                                                                                           Sequence 936 BP; 6 A; 138 C; 8 G; 8 T; 776 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acids containing electron-transfer group, useful as labels in hybridization assays, e.g. for genotyping, allowing repeat analyses on a single surface \cdot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-JUL-1999; 99US-0145695.
17-MAR-2000; 2000US-0190259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-FEB-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200107665-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Electron-transfer group; ETM; mismatch; genotyping;
gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oligonucleotide D2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 6; Page 128; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Umek RM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JUL-2000; 2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF58259;
299
                             249
                                                           239
                                                                                       189
                                                                                                                     179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CLIN-) CLINICAL MICRO SENSORS
                                                                                                                                                                               119
                                                                                                                                                 129
                                                                                                                                                                                                           69
                                                                                                                                                                                                                                         59
                                                                                                                                                                                                                                                                                                   Local Similarity
nes 5; Conserv
                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                      gtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcagccacgacc 128
ttaaaaaccatatccaaggtttccctttatatttctttcaggatatccattctggggctct 308
                                                                      atccagatcctgtttggaattatgaccttttcttttggagttatcttccttttcaccttg
                                                        ttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggact 188
                                                                                                                                                                                                                                                                                                 16.1%; Score 108.8; DB 22; ilarity 0.7%; Pred. No. 5.1e-20; Conservative 418; Mismatches 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INC.
                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                             Length 936;
                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                 Gaps
                                                                                    248
358
                                                                                                                                                                                                                                                                                                 0;
```

```
g
              δÃ
                               망
                                             δÃ
                                                                Db
                                                                               Qy
                                                                                                 망
                                                                                                              Qγ
                                                                                                                                 뫄
                                                                                                                                                Qy
                                                                                                                                                                  B
                                                                                                                                                                                δÃ
                                                                                                                                                                                                   В
                                                                                                                                                                                                                  Q
                                                                                                              489 aatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacattgatgact 548
                                                                                                                                  479
                                                                                                                                                  429
719
                                                                 599
                                                                                549
                                                                                                                                                                  309 gttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaact
                                                               ttoagoattattgaattattoatttototgootttotoaatttttggggtgccactcagag 608
                                                                                                                                 attetecteacatttggtttecatectagateaaaactacatttgtggttatteteaceaa 488
                                                                                                                                                                           ctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaatc
WWWWWWW
              aaaaaaaa 676
                                        726
                                                668
                                                                                                                                                                                   428
                                                                                                                                                                                                    418
                                                                                                 598
                                                                                                                                  538
                                                                                                                                                                   478
                                                                                                                                                                                                                    368
```

Search completed: November 29, 2001, 00:23:58 Job time: 4315 sec

```
Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
      000000000
                                                                                                                                                                                     0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ptal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                               No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            on:
         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB DB
                                                                                                                                        seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Issued_Patents_NA:*
1: /cgn2_6/ptodata/2,
2: /cgn2_6/ptodata/2,
3: /cgn2_6/ptodata/2,
4: /cgn2_6/ptodata/2,
5: /cgn2_6/ptodata/2,
6: /cgn2_6/ptodata/2,
                                                                                                                                                                                                                                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-735-712-9
676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      November 29, 2001, 00:20:23; Search time 83.78 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         351203 segs, 113238999 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/Backfiles1.seq:*
/cgn2_6/ptodata/2/ina/backfiles1.seq:*
    1661
1661
1662
1663
2545
2545
246240
246240
246240
246240
6669
6669
6669
3947
3947
3947
3947
3947
3947
39793
39793
39793
                                                                                                                                                                                                                                                                                                                                                                                                                               Length
 US-08-916-902A-2
US-09-213-389-2
US-08-318-492-3
US-08-707-340-3
US-08-707-340-3
US-07-869-934-22
US-09-103-663-22
US-09-103-663-22
US-08-724-394A-21
US-08-724-394A-22
US-08-800-929A-5
US-08-800-929A-5
US-08-800-929A-5
US-08-800-929A-5
US-08-800-929A-5
US-08-91-71-710-55A-1
US-08-446-855A-1
US-08-446-855A-1
US-08-446-855A-1
US-08-446-855A-1
US-08-446-855A-1
US-08-446-855A-1
US-08-446-855A-1
US-08-446-855A-1
US-08-410-701-56
US-08-410-701-56
US-08-410-916-56
US-09-041-711-1
US-09-041-718-1
US-09-041-718-56
US-09-041-718-56
US-09-041-718-56
US-09-041-718-56
US-09-041-718-56
US-09-041-718-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (without alignments)
1827.395 Million cell updates/sec
Sequence 2, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 22, Appl
Sequence 22, Appl
Sequence 21, Appli
Sequence 21, Appli
Sequence 22, Appli
Sequence 23, Appli
Sequence 24, Appli
Sequence 47, Appli
Sequence 56, Appli
Sequence 57, Appli
Sequence 58, Appli
Sequence 58, Appli
Sequence 59, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                              Description
```

	0 (o 0	o	00000
	443	39 40 41	335 34 37	28 30 31
	30.8 30.8	30.8 30.8	31.4 31.4 31.4 31	31.6 31.6 31.6 31.4
	4 4 4 . 0 0 0 0	4444 00000	4 4 4 4 4 0 0 0 0 0 0	4.7 4.7 4.6
	3198 3198 3466	2839 2945 9439 699	3580 4291 4517 785 1902	4171 4171 4171 4171 3393 3393
	144	4 w w n	40444	0 w r) 4 4
ALIGNMENTS	US-08-842-306B-48 US-08-838-973B-48 US-08-468-036-38	US-09-061-702-1 US-09-058-489-85 US-09-058-489-89 PCT-US95-13335-2 US-08-750-357-8	US-09-081-345-1 US-08-417-210A-81 US-09-140-804-9 US-09-276-141-11 US-08-793-044-4	US-09-059-099-5 US-09-058-264-5 PCT-US95-06530-5 US-09-104-324B-1 US-09-162-713-1
	Sequence 48, Appl Sequence 48, Appl Sequence 38, Appl	Sequence 1, Appli Sequence 85, Appl Sequence 89, Appl Sequence 2, Appli Sequence 8, Appli	Sequence 1, Appli Sequence 81, Appli Sequence 9, Appli Sequence 11, Appli Sequence 4, Appli	Sequence 5, Appli Sequence 5, Appli Sequence 5, Appli Sequence 1, Appli Sequence 1, Appli

```
; LIBRARY: BRAII
; CLONE: 927955
US-08-916-902A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 1
US-08-916-902A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2,
Patent No.
                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/916
FILING DATE: Herewith
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                              INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 31/3
STREET: 31/3
CITY: Palo Alto
STATE: CA
COUNTR: USA
CIP: 94304
7.IP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Lal, Preeti
APPLICANT: COTley, Neil C.
TITLE OF INVENTION: HIGH AFFINITY
TITLE OF INVENTION: RECEPTOR-LIKE
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                  STRANDEDNESS:
TOPOLOGY: line
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Bandman, Olga
                                                                                                                             LENGTH:
                                                                                                                                                                                                       TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2, Application 
5. 5871930
                                                                                           nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Incyte Pharmaceuticals, Inc
3174 Porter Drive
                                     BRAINOT 04
                                                                          linear
                                                                                        single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08916902A
                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/916,902A
                                                                                                                                                                                                                                                                  PF-0371 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IMMUNOGLOBULIN PROTEIN
```

1;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
US-09-213-389-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Bandman, Olga
APPLICANT: Lal, Preeti
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2, Application Patent No. 5977072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                        OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        331 ccttcctaattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451
                                                                                                                                                                                                                                                                                                                                                           STREET:
CITY: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               151 aaaaattatttgctagaaaatgaaaatcttagggactatccagatcctgtttggaatta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               325
                                                                                                                                                           CLASSIFICATION:
                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tcctagat-----caaaactacatttgtggttattctcaccaaaatagtcagtgtaagg 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cctttatatttctttcaggatatccattctggggctctgttttgttcattaattctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGACTATGTCCATCTTAATGGGTCTGGATGGCATGGTGCTCCTCTTAAGTGTGCTGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTTTTATTCATTCCATCACCCTTACTGTAACTACTATGGCAACTCAAATAATTGTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tgaatcttcttagtgccctgagagcaatagctggaatcattctcctcacattttggtttca 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTGCATTGCTGTGTCCCTCTGCCTTTGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ctgttactgtcctgttcttgggaattttgattacattgatgactttcagcattattgaat 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAATATCACCAGCTCTGTACTGGCTGCATCAGGGATCTTAATCAACACATTTAGCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTTGTCAATTGCAGCAGGAATTAGAACTACAAAAGGCCTGGTCCGAGGTAGTCTAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTATTTCCGTGTATATCGGGGTACACAATTTGGGGGGTCAGTAATGTTTATTATTTCAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAGCCTTAGCATGGGAATAACAATGATGTGTATGGCATCTAATACTTATGGAAGTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tgaccttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAAGTTCTTGAAGGGAGAACCCCAAAGTCCTTGGGGTTGTGCAGATTCTGACTGCCCTGA: 384
                                                                                                                                                                                                                                                                                                           94304
                                                                                                                                                                                                                                                                                                                                                           Palo Alto
                                                                                                                                                                                                                                                                                                                                             CA
                                                                                                                                                                                                                                                                                                                                                                           3174 Porter Drive
                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                          IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                            Incyte Pharmaceuticals,
                                                                                                                                                                                                                                                                           Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12.8%;
51.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                             HIGH AFFINITY IMMUNOGLOBULIN RECEPTOR-LIKE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/09213389
                                                                                                                                                                                          US/09/213,389
                                                                                                                       08/916,902
                                   PF-0371 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 86.4; DB 2; Pred. No. 6.1e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
```

```
US-08-318-492-3
; Sequence 3, Application US/08318492
; Patent No. 5552312
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            us-09-213-389-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                APPLICANT: Lim, Bing
APPLICANT: Adra, Chaker N.
APPLICANT: Lelias, Jean-Michel
             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                   CORRESPONDENCE ADDRESS: ADDRESSEE: Hamilton,
                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IMMEDIATE SOURCE:
LIBRARY: BRAINOTO4
CLONE: 927955
                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 1669 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            505
                                                                                                                                                                                                                                                                                                                                                                                                       745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  151 aaaaattatttgctagaaaatgaaaatcttagggactatccagatcctgtttggaatta 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       685 GGACTATGTCCATCTTAATGGGTCTGGATGGCATGGTGCTCCTCTTAAGTGTGCTGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         385 TGAGCCTTAGCATGGGAATAACAATGATGTGTATGGCATCTAATACTTATGGAAGTAACC
                                                                                COUNTRY:
                                                                                                   STATE:
                                                                                                                    CITY:
                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
TOPOLOGY: li
   OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
les 232; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ccttcctaattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataa 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cctttatatttctttcaggatatccattctggggctctgttttgttcattaattctggag 330
                                                                                                                                                                                                                                                                                                                                                                                                       TCTGCATTGCTGTGTCCCTCTGCCTTTGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                              tattcatttctctgcctttctcaattttggggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ctgttactgtcctgttcttgggaattttgattacattgatgactttcagcattattgaat 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tcctagat-----caaaactacatttgtggttattctcaccaaaatagtcagtgtaagg 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAAGTTCTTGAAGGGAGAACCCAAAGTCCTTGGGGTTGTGCAGATTCTGACTGCCCTGA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGTTTTATTCATTCCATCACCCTTACTGTAACTACTATGGCAACTCAAATAATTGTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAATATCACCAGCTCTGTACTGGCTGCATCAGGGATCTTAATCAACACATTTAGCTTGG 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tgaatcttcttagtgccctgagagcaatagctggaatcattctcctcacatttggtttca 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTTGTCAATTGCAGCAGGAATTAGAACTACAAAAGGCCTGGTCCGAGGTAGTCTAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTATTTCCGTGTATATCGGGTACACAATTTGGGGGGTCAGTAATGTTTATTATTTCAGGAT 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tgaccttttcttttggagttatcttccttttcaccttgttaaaaaccatatccaaggtttc 270
                                                                     02173
                                                                                                                    Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
                                                                                                 Massachusetts
                                                                                                                                Two Militia Drive
                                                                                   U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
compatible
PC-DOS/MS-DOS
                                                                                                                                                                                                        RECOMBINANT
ASSAYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12.8%;
                                                                                                                                                   Brook,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 86.4; DB 2;
Pred. No. 6.1e-15;
                                                                                                                                                     Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                       HTM4
                                                                                                                                                     e٦
                                                                                                                                                     Reynolds,
                                                                                                                                                                                                                                                                                                                                                                                                                                      598
                                                                                                                                                                                                                                                                                                                                                                                                       778
                                                                                                                                                       P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            564
```

```
δã
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                       US-08-707-340-3
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-318-492-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (61/) ...
TELEFAX: (61/) ...
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
SEQUENCE 1661 base pairs
FRIGH: 1661 base pairs
                                                                                                  Sequence 3, Application US/08707340 Patent No. 5705615 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 239; Conserv
            APPLICANT: Lim, Bing
APPLICANT: Adra, Chaker N.
APPLICANT: Lelias, Jean-Michel
TITLE OF INVENTION: RECOMBINANT HTM4 GENE, PROTEIN
TITLE OF INVENTION: ASSAYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: BIH94-03
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: 1. MOLECULE TYPE:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                            654
                                                                                                                                                                                                                                                                                                                                513
                                                                                                                                                                                                                                                             569
                                                                                                                                                                                                                                                                                               594
                                                                                                                                                                                                                                                                                                                                                                   534
                                                                                                                                                                                                                                                                                                                                                                                                     458
                                                                                                                                                                                                                                                                                                                                                                                                                                      474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        234 AAAATTACAAGTTCTTGGGGCCATCCAGATCCTGAATGCAGCAATGATTCTGGCTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      167 aaaaatgaaaatcttagggactatccagatcctgtttggaattatgaccttttctttttgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                          CGTAACTATCTCTACCATAGCCATGTGGTGCAATGCAAACTGCTGTAATT
                                                                                                                                                                                                                                              catttctctgcctttctcaattttggggtgccactcagaggattgtgatt
                                                                                                                                                                                                                                                                                                                ----gtcctgttcttgggaatttttgattacattgatgactttcagcattattgaattatt 568
                                                                                                                                                                                                                                                                                                                                                                                           tcaaaactacatttgtggttat-tctcaccaaaatagtcagtgtaaggctgttact----
                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCCAGTGCTACAATTGCACTAGTGGGGACTGCTTTTCTCTCACTAAATATAGCAGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          tottagtgecetgagagcaatagetggaateatteteeteacattttggttteateetaga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTTGTAGCAGGGATAAAACCCCACAAGAACATGGATACAGAACAGTTTTGGAATGAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatgaatct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTCTACACAGGCTACCCGATTTGGGGGTGCTGTGTTTTTCTGTAGTTCAGGAACCTTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     atttctttcaggatatccattctggggctctgttttgttcattaattctggagccttcct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTCTTTCTGGGTTCCTTGCAATACCCATACCACTTCCAAAAAGCACTTCTTTTTCTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agt-----tatcttccttttcaccttgttaaaaccatatccaaggtttcccttttat 277
                                                                                                                                                                                                                                                                                            GGGCTCCATATCAAATGGCATGGTGTCTCTACTGCTGATTCTCACCTTGCTGGAATTATG
                                                                                                                                                                                                                                                                                                                                                                 TATCCAGTCATTAAGGAGTTGTCACTCTTCATCAGAGTCACCGGACCTATGCAATTACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
97..741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/318,492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 63.2; DB 1;
Pred. No. 1.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                            703
                                                                                                                                                                                                                                                             618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                    533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       226
                                                                                                                                                                                                                                                                                                                                                                 593
                                                                                                                                                                                                                                                                                                                                                                                                    512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
```

```
Qy
                                                                В
                                                                                                QΥ
                                                                                                                                  В
                                                                                                                                                                Qy
                                                                                                                                                                                                      망
                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; NAME/KEY:
; LOCATION:
US-08-707-340-3
                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:

NAME: BTOOK, DAVIG E.

NAME: BTOOK, DAVIG E.

REGISTRATION NUMBER: 22,592

REFERENCE/DOCKET NUMBER: BIH9

TELEPHONE: (617) 861-6240

TELEPHONE: (617) 861-5240

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 1661 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 239; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 0 FILING DATE: 06-OCT-1994 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 03-SEP-19
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS: ADDRESSEE: Hamilton,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                 513
                                                                                                                                                                                                      414 TGTTGTAGCAGGGATAAAACCCACAAGAACATGGATACAGAACAGTTTTGGAATGAACAT
594
                                                                                                   458
                                                                                                                                    474
                                                                                                                                                                     398
                                                                                                                                                                                                                                       338
                                                                                                                                                                                                                                                                         354
                                                                                                                                                                                                                                                                                                        278
                                                                                                                                                                                                                                                                                                                                                                            227
                                                                                                                                                                                                                                                                                                                                                                                                             234
                                                                                                                                                                                                                                                                                                                                                                                                                               167 aaaaatgaaaatcttagggactatccagatcctgtttggaattatgaccttttcttttgg 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: Two Mil CITY: Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: single
                                                                                                                                                                                                                                                                                      atttctttcaggatatccattctggggctctgttttgttcattaattctggagccttcct 337
GGGCTCCATATCAAATGGCATGGTGTCTCTACTGCTGATTCTCACCTTGCTGGAATTATG
                   ----gtcctgttcttgggaattttgattacattgatgactttcagcattattgaattatt 568
                                                                                                                                                                                                                                aattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatgaatct 397
                                                                                                                                                                                                                                                                                                                                                                        agt-----tatcttccttttcaccttgttaaaaccatatccaaggtttccctttat 277
                                                                  TATCCAGTCATTAAGGAGTTGTCACTCTTCATCAGAGTCACCGGACCTATGCAATTACAT
                                                                                                                                                           tcttagtgccctgagagcaatagctggaatcattctcctcacatttggtttcatcctaga
                                                                                                                                                                                                                                                                        CTTCTACACAGGCTACCCGATTTGGGGTGCTGTGTTTTTCTGTAGTTCAGGAACCTTGTC
                                                                                                                                                                                                                                                                                                                                          TGTCTTCTGGGTTCCTTGCAATACCCATACCACTTCCAAAAGCACTTCTTTTTCTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                             AAAATTACAAGTTCTTGGGGCCATCCAGATCCTGAATGCAGCAATGATTCTGGCTTTGGG
                                                                                     | tcaaaactacatttgtggttat-tctcaccaaaatagtcagtgtaaggctgttact----
                                                                                                                                  TGCCAGTGCTACAATTGCACTAGTGGGGACTGCTTTTCTCTCACTAAATATAGCAGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM PC compatible SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 08/675,648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/707,340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brook, Smith & Reynolds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08/318,492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIH94-03A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 63.2; DB 1;
Pred. No. 1.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
653
                                                                  593
                                                                                                                                    533
                                                                                                                                                                    457
                                                                                                                                                                                                      473
                                                                                                                                                                                                                                                                        413
                                                                                                                                                                                                                                                                                                                                                                                                             293
                                                                                                   512
                                                                                                                                                                                                                                                                                                                                          353
```

ω --

```
밁
                                 δõ
                                                                   Вb
                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                           US-08-994-578-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
US-08-994-578-3
                                                                                                                                                         Best
                                                                                                                                                                        Query Match
                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (781) 861-9540 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                           FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: BITTELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 08/318,492 FILING DATE: 06-OCT-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 03-JUL-1996 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIDM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Lelias, Jean-Michel TITLE OF INVENTION: HTM4 METHOL TITLE OF INVENTION: AGONISTS A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Lim, Bing
APPLICANT: Adra, Chaker N.
APPLICANT: Lelias, Jean-Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                     227
                                                                   234 AAAATTACAAGTTCTTGGGGCCATCCAGATCCTGAATGCAGCAATGATTCTGGCTTTGGG
                                                                                  167 aaaaatgaaaatcttagggactatccagatcctgtttggaattatgaccttttctttttgg 226
294 TGTCTTTCTGGGTTCCTTGCAATACCCATACCACTTCCAAAAGCACTTCTTTTTCTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    569 catttctctgcctttctcaattttggggtgccactcagaggattgtgatt 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             654 CGTAACTATCTCTACCATAGCCATGTGGTGCAATGCAAACTGCTGTAATT. 703
                                                                                                                                       Local Similarity
les 239; Conserv
                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 08/707,340 FILING DATE: 03-SEP-1996
                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                              ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                              agt-----tatcttccttttcaccttgttaaaaccatatccaaggtttccctttat 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Brook, David E.
                                                                                                                                                                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08994578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Massachusetts
                                                                                                                                                                                                                                                                                                                                            1661 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Hamilton, Brook, Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
                                                                                                                                       Conservative
                                                                                                                                                                                                                                           CDS
97..738
                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                  (781) 861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          December 19,
                                                                                                                                                                                                                                                                                                          single
                                                                                                                                                    9.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HTm4 METHODS OF TREATMENT AND ASSAYS, AGONISTS AND ANTAGONISTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 08/675,648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/994,578
er 19, 1997
                                                                                                                                                                                                                                                                                                                                                                                  ω
••
                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIH94-03A2Z
                                                                                                                                  Score 63.2; DB 2;
Pred. No. 1.7e-08;
0; Mismatches 213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Smith & Reynolds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Version #1.30
                                                                                                                                                                      Length 1661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P.C.
                                                                                                                                      Indels
                                                                                                                                      18;
                                                                                                                                  Gaps
 353
                                                                  293
                                                                                                                                    ω,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
US-07-869-933-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNING COUNTY COUNTY COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
COUNTY COUNTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 22, Application US/07869933 Patent No. 5770396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (703)683-4109
TELEX: 899149
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 40
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 2545 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               654 CGTAACTATCTCTACCATAGCCATGTGGTGCAATGCAAACTGCTGTAATT 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                569 catttctctgcctttctcaattttggggtgccactcagaggattgtgatt 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           414
                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  278 atttctttcaggatatccattctggggctctgttttgttcattaattctggagccttcct 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    338 aattgcagtgaaaagaaaaaccacagaaactctgataatattgagccgaataatgaatct 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            354 CTTCTACACAGGCTACCCGATTTGGGGTGCTGTGTTTTTCTGTAGTTCAGGAACCTTGTC 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US
FILING DATE: 19920416
CLASSIFICATION: 514
                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                 TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCTCCATATCAAATGGCATGGTGTCTCTACTGCTGATTCTCACCTTGCTGGAATTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----gtcctgttcttgggaattttgattacattgatgactttcagcattattgaattatt 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTTGTAGCAGGGATAAAACCCACAAGAACATGGATACAGAACAGTTTTGGAATGAACAT 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATCCAGTCATTAAGGAGTTGTCACTCTTCATCAGAGTCACCGGACCTATGCAATTACAT 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tcaaaactacatttgtggttat-tctcaccaaaatagtcagtgtaaggctgttact---- 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCCAGTGCTACAATTGCACTAGTGGGGACTGCTTTTCTCTCACTAAATATAGCAGTTAA 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tettagtgeeetgagageaatagetggaateatteteeteaeattttggttteateetaga 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alexandria
                                                                                                                                                                                                                                                                                                                          NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : (703)836-9300
(703)683-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3: Foley & Lardner
1800 Diagonal Road,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KINET, Jean-Pierre
VENTION: ISOLATION, CHARACTERIZATION, AND USE OF
VENTION: THE HUMAN B SUBUNIT OF THE HIGH AFFINITY RECEPTOR FOR
   sig_peptide
                                                                                                          46..786
                                                                                                                                               CDS
                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                    CDNA
                                                                                                                                                                                                                                                                                            double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IMMUNOGLOBULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/07/869,933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40399/154 NIHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               653
```

US-07-869-933-22

NAME/KEY: LOCATION:

mat_peptide 55..786

Query Match
Best Local Similarity

7.3%; 52.3%;

Score 49.2; DB 1; Pred. No. 0.00015;

Length 2545;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                 Q
                                                    밁
                                                                                 οy
                                                                                                                                                                                                  ; NAME/KEY: CDS
; LOCATION: (46)..(786)
US-09-103-663-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
US-09-103-663-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 22
LENGTH: 2545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION: APPLICANT: Kinet et al.
                                                                                                                      Matches
                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 22, Application US/09103663D Patent No. 6171803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Isolation, characterization, and use of the human beta TITLE OF INVENTION: subunit of the high affinity receptor for TITLE OF INVENTION: immunoglobulin E. FILE REFERENCE: 50490
                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/103,663D CURRENT FILING DATE: 1998-06-23 EARLIER APPLICATION NUMBER: 07/869,933 EARLIER FILING DATE: 1992-04-16 NUMBER OF SEQ ID NOS: 35 SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                   NAME/KEY: sig_peptide
LOCATION: (46)..(54)
                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
                   193
                                                    188
                                                                     133 caactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggactatcc 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           308 CTTCAGACTTTGACGACGAAGTGCTTTTATTATAGAGCAGGCTACCCATTCTGGGGTG 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          133 caactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggactatcc 192
                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _ ç
agatcctgtttggaattatgaccttttcttttggagttatcttccttttcacctt-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O.L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCTGGTGAGAGCCAGCCTGGGAGCAAACATTGTCAGCAGCATCGCTGCAGGCTTGGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaa 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGTGCTGTTTTGTCTGGATTTTTGTCAATTATGTCCGAAAGGAAAAACACACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaccacagaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTTCTGGTTTGATATGCCTTTGTTTTGGAACAGTTGTCTGCTCCACACTCCAGA 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agatcctgtttggaattatgaccttttcttttggagttatcttccttttcacctt----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCACAGCAGACATGGCAGTCATTTTTGAAGAAAGAGTTGGAGTTCCTGGGCGTAACCC 247
                                                caccacagcagacatggcagtcatttttgaagaaagagttggagttccttgggcgtaaccc
                                                                                                                    158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                    Conservative
                                                                                                                                7.3%;
                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                  Score 49.2; DB 4;
Pred. No. 0.00015;
0; Mismatches 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches 138;
                                                                                                                    138;
                                                                                                                                                Length 2545;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                    Indels
                                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                  Gaps
                                                  247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           247
                   247
                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
```

Matches

Conservative

6.3%; Score 42.6; DB 6.6%; Pred. No. 0.015; ative 204; Mismatches

DB 1; 15; s 178;

Length 7218; Indels 0

0

Gaps

0

Query Match Best Local Similarity

```
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 14,
Patent No. 5
                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 3047
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)836-9300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
             IMMEDIATE SOURCE:
CLONE: pTZgpt-
                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 7218 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: SCHEIFL: APPLICANT: FALKNER TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          428 atctggtgagaggcagcctgggagcaaacattgtcagcagcatcgctgcaggcttgggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         248 aagttotggttggtttgatatgcctttgttttggaacagttgtctgctccacactccaga
                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                               TOPOLOGY:
                                                                                                                                                           TELEFAX:
                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ς=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tc 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaa 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gttaaaaccatatccaaggtttcccttta-tatttctttcaggatatccattctggggct 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaa 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cagtgctgtttgttttgtctggatttttgtcaattatgtccgaaaggaaaaacacactgt 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cttcagactttgacgacgaagtgcttttattatatagagcaggctacccattctggggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22313-0299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    $4, Application US/08232463
5670367
                                                                             nucleic acid
                                                                                                                                               899149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ٧A
             pTZgpt-F1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1800 Diagonal Road, Suite
                                                                                           7218 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FALKNER, F. G.
                                                                                                                                                           (703)683-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCHEIFLINGER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DORNER,
                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Foley & Lardner
                                                                                                                                                                                                                                                                     UMBER: EP 91 114 300.6
26-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RECOMBINANT FOWLPOX VIRUS
                                                                                                                                                                                                                                                                                                                         US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                      US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ,
[2]
                                                                                                                                                                                                             30472/114 IMMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            367
```

0,

```
RESULT 9
US-08-724-394A-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 20, Application US/08724394A Patent No. 5872237
                                                           TELEFAX: 415-576-0300 INFORMATION FOR SEQ ID NO: 20: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Meganase.
TITLE OF INVENTION: Sequences
                                                                                                                                                                        CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Fitts, Renee A.
                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND and TOWNSEND and CREW LLP
STREET: Two Embarcadero Center, 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: 415-576-0200
                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Thomas, Winston
APPLICANT: Tsuchihashi, Zenta
APPLICANT: Wolff, Roger K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1454 CTTTAACTACTTGCATAGATAGGTAATTACAGTGATGCCTACATGCCGT 1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                           REGISTRATION NUMBER: 35 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
             STRANDEDNESS:
                                                                                                                                                                                                                           FILING DATE: 01-OCT-1996
                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn
                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cagaaactctgataatattgagccgaataatgaatcttcttagtgccct 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYGTACCAAATTCTTCTATCT 1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ggggctctgttttgttcattaattctggagccttcctaattgcagtgaaaaagaaaaacca 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tagggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttt 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                            94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                            San Francisco
                         nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                            CA
                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ruddy, David A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kronmal, Gregory S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Feder, John N.
not relevant
           not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Megabase Transcript Map:
Sequences and Antibodies
                                                                                                                                                                                                                                                                              Release #1.0, Version #1.30
                                                                                                                                                                                                                                            US/08/724,394A
                                                                                                                                                       35,136
                                                                                                                                              017957-000100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thereto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No. 5872237el
```

```
RESULT 10
US-08-724-394A-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-724-394A-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 67; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
                                                                                                                                                                                                                                                           TELEFAX: 415-576-0300 INFORMATION FOR SEQ ID NO: 21: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36810 A 36810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36750 TGATGGCTTGAAACAACAAAATTATTTATTTATTTACAATTCTAAAGGTCAGAAGTCC 36809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36690 CTCCTCAGATCTCTGTATTTAATTCTATTTTATTGCTGTTGTAGTAAATTACCACAACTG 36749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/724,394A
FILING DATE: 01-CCT-1996
CINCOLURI STREET OF THE PROPERTY OF THE POLICY OF THE PROPERTY OF THE POLICY OF THE POLICY
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Fitts, Renee A.
REGISTRATION NUMBER: 35,136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                              FEATURE:
                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: 415-576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Tsuchihashi, Zenta
APPLICANT: Wolff, Roger K.
TITLE OF INVENTION: Megabase Transcript Map: No. 58'
TITLE OF INVENTION: Sequences and Antibodies Thereto
NUMBER OF SEQUENCES: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 tgatgactttcagcattattgaattattcatttctctgcctttctcaattttggggtgcc 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601 a
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: TWO LINCO CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc_fea
LOCATION: 1.24624
OTHER INFORMATION:
                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: TOWNSEND and TOWNSEND and CREW LLP STREET: Two Embarcadero Center, 8th Floor
                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1, Application US/08724394A
5872237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94111-3834
                                                                                                                                                                                                   nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CA
                                                                                                                                                                                                                               246240 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Thomas, Winston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lauer, Peter M.
Ruddy, David A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kronmal,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Feder, John N.
                                                                                                                                 not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
1..246240
misc_feature
1..246240
                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA
                                                                                                                                                                not relevant
                                                                                                                                 relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gregory S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "HLA-H.CONTIG"
                                                                                                                                                                                                                                                                                                                                                                                                                                          017957-000100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 34.6; DB Pred. No. 9.2; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 246240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5872237el
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

/note= "HLA-H.CONTIG"

```
; LOCATION: 1..2462.
; OTHER INFORMATION:
US-08-724-394A-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ŷ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: US-08-724-394A-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-724-394A-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 22, Appli
Patent No. 5872237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36690 CTCCTCAGATCTCTGTATTTAATTCTATTTTATTGCTGTTGTAGTAAATTACCACAACTG 36749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36810 A 36810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36750
                                                                                                                                                                               NFORMATION FOR SEQ ID NO: 22:
                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION: TELEPHONE: 415-576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                   FEATURE
                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION: NAME: Fitts, Renee A.
                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541 tgatgactttcagcattattgaattattcatttctctgcctttctcaatttttggggtgcc 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481 ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaatttttgattacat 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601 a 601
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/724,394A
FILING DATE: 01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: TOWNSEND and TOWNSEND and CREW LLP STREET: Two Embarcadero Center, 8th Floor CITY: San Francisco
                                              NAME/KEY: misc_feature
                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                  TELEFAX:
                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                NAME: Fitts, Renee A. REGISTRATION NUMBER:
                                                                                                   TOPOLOGY:
                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGATGGCTTGAAACAACACAAAATTATTTAATTTACAATTCTAAAGGTCAGAAGTCC 36809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94111-3834
                                                                                                                               nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08724394A
                                                                                                                                             246240 base pairs
                                                                                                                                                                                                  415-576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tsuchihashi, Zenta
Wolff, Roger K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Thomas, Winston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ruddy, David A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kronmal,
                                                                                                SS: not relevant not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Feder, John N.
                                                                                  CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.1%;
55.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Megabase Transcript Map: No. 58 Sequences and Antibodies Thereto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gregory S.
                 /note= "HLA-H.CONTIG"
                                                                                                                                                                                                                                                              35,136
                                                                                                                                                                                                                                                  017957-000100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 34.6;
Pred. No. 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No. 5872237el
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 246240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
;
US-08-568-147B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-568-147B-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/08568147B Patent No. 5783422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                              TELEX: 230 901 SANS UR INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36690 CTCCTCAGATCTCTGTATTTAATTCTATTTTATTGCTGTTGTAGTAAATTACCACAACTG 36749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36810 A 36810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36750 TGATGGCTTGAAACAACACAAAATTATTTATTTATTTACAATTCTAAAGGTCAGAAGTCC 36809
                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: 516-742-4343
TELEFAX: 516-742-4366
                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 800,9 FILING DATE: 02-DEC-1991 ATTORNEY/AGENT INFORMATION: NAME: DIGIGIO, Frank S.
                                  FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481 ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaatttttgattacat 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541 tgatgactttcagcattattgaattattcatttctctgcctttctcaatttttggggtgcc 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Garden City
STATE: New York
                                                                                 STRANDEDNESS: bo
TOPOLOGY: · linear
                                                                                                               TYPE: nucleic acid
                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67;
                                                                                                                                1711 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Scully, Scott, Murphy & Presser 400 Garden City Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Takeda, Katsumichi
VENTION: DNA FRACMENT CODING FOR SQUAMOUS CELL
VENTION: CARCINOMA-ASSOCIATED ANTIGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sekiguchi, Kiyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kato, Hiroshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Suminami, Yoshinori
                 62..1234
                                                                  cDNA to
                                                                                                   both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.1%;
                                                                                                                                                                                                                                                                                                                                        800,952
                                                                                                                                                                                                                                                                                                                                                                                                       US/08/568,147B
                                                                  mRNA
                                                                                                                                                                     <u>_</u>
                                                                                                                                                                                                                                                     8425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 34.6; DI
Pred. No. 9.2;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 246240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

Query Match . 5.0%; Best Local Similarity 47.6%; Matches 99; Conservative

Score 33.6; DB 1; Length 1711; Pred. No. 2.7;

Mismatches

109;

Indels

0;

0;

```
US-08-800-929A-5/c
; Sequence 5, Application US/08800929A
                                                                                                       망
                                                                                                                                          δÃ
                                                                                                                                                                                    밁
                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KBY: variation
LOCATION: (3677)...(3951)
OTHER INFORMATION: n can be any nucleotide
US-09-212-971-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWALL SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IS-09-212-971-5/c
                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 70; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5, Application US/09212971B
Patent No. 6107041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/212,971B
CURRENT FILING DATE: 1998-12-16
EARLIER APPLICATION NUMBER: 60/017,354
EARLIER FILING DATE: 1996-04-26
EARLIER FILING DATE: 1996-04-26
EARLIER FILING DATE: 1996-11-14
EARLIER FILING DATE: 1996-11-14
EARLIER APPLICATION NUMBER: 09/800,929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TITLE OF INVENTION: MAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EARLIER FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Korneluk, Robert G
APPLICANT: MacKenzie, Alexando
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Liston, Peter APPLICANT: Baird, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                       2826
                                                                                                                                                                                                                                                              2946 TGGCTGTAAAATAAGACCTTTCAAAGATTTTAAATTTTTTTGTCCCCCTCAAAGAACTAAC 2887
                                                                                                                                                                                                                                                                                       160 ttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatgacctttt 219
                                                                                                                                                                                                                         220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            425
                                                                                                                                          280 ttctttcagga 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    245 CTTGATCAAAGTGAAGAACCTTCTTAAT 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 305 GAACATTTCCTGACCTATCAACATGATATGTTGCAGCTTTTCCTGTGGTGTTCTCTGTGA 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            193 agatoctgittggaattatgaccttttcttttggagttatcttccttttcaccttgttaa 252
                                                                                                                                                                                                        cttttggagttatcttcctttttcaccttgttaaaaccatatccaaggtttccctttatat 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tgttcattaattctggagccttcctaat 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGTTTCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aaccatatccaaggtttccctttatatttctttcaggatatccattctggggctctgttt 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCTAAATATTCCTGTAAAAATAGATACGTTTTTTCTCCGAAGAGCTTGTTGGCGATCT 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              caactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggactatcc 192
                                                                                                                                                                                  ATTGTAGAGTTATTCAACTTATCACCTCCTGAAAACATTTTTGAACTTTTTGTTTTTTTAA 2827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOS:
                                                                                                                                                                                                                                                                                                                                                             4.98;
53.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alexander E
                                                                                                                                                                                                                                                                                                                                           Score 33.4; DE Pred. No. 5.2; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                DB 3;
                                                                                                                                                                                                                                                                                                                                             61;
                                                                                                                                                                                                                                                                                                                                                                                Length 6669;
                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                             0;
```

```
밁
                                                                                                    QY
                                                                                                                                           망
                                                                                                                                                                          QΥ
 멍
                                 Ş
                                                                                                                                                                                                                                                                                                     US-08-800-929A-5
                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: (
SEQUENCE CHARACTERISTICS:
LENGTH: 6669 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/030,590
FILING DATE: 14-NOV-1996
APPLICATION NUMBER: 60/017,354
FILING DATE: 26-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bleker-Brady, Kristina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/800,929A FILING DATE: 13-FEB-1997 CLASSIFICATION: 424
2826 ATGTTTCTGAA 2816
                                                                                                                                           2946 TGGCTGTAAAATAAGACCTTTCAAAGATTTTAAATTTTTTTGTCCCCCTCAAAGAACTAAC 2887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-428-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: DETECTION AND TITLE OF INVENTION: IAPS AND NAIP TITLE OF INVENTION: DISEASE
                                                                      2886 ATTGTAGAGTTATTCAACTTATCACCTCCTGAAAACATTTTTGAACTTTTGTTTTTCTAA 2827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Tsang, Benjamin K
APPLICANT: Pratt, Christine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                               160 ttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatgacctttt 219
                                 280 ttctttcagga 290
                                                                                           220 cttttggagttatcttcctttttcaccttgttaaaaccatatccaaggtttccctttatat 279
                                                                                                                                                                                                                              Watch 4.9%;
Local Similarity 53.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Boston
STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 617-428-7045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6133437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAUSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    176 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MacKenzie, Alexander
Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baird, Stephen
                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clark & Elbing LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISEASE: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/017,354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/030,590
                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                              Score 33.4; DB 3; Pred. No. 5.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07891/009001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MODULATION OF FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERAT
                                                                                                                                                                                                                61;
                                                                                                                                                                                                                                               Length 6669;
                                                                                                                                                                                                              Indels
                                                                                                                                                                                                              0;
```

RESULT 15 US-09-617-053A-5/c ; Sequence 5, Application US/09617053A ; Patent No. 6300492 ; GENERAL INFORMATION:

```
APPLICANT: MacKenzie, Alexander E
APPLICANT: Matton, Peter
APPLICANT: Baird, Stephen
APPLICANT: Tsang, Benjamin K
APPLICANT: Transparent Manushamin K
APPLICANT: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: DISEASE
FILE REFERENCE: 07891/09903
CURRENT APPLICATION NUMBER: US 08/900,929
FRICE REPLICATION NUMBER: US 08/800,929
PRIOR APPLICANTON NUMBER: US 08/800,929
PRIOR APPLICANTON NUMBER: US 08/800,929
PRIOR FILING DATE: 1997-02-13
NUMBER OF SEQ ID NOS: 17
SOCTWARE: FastSEQ for Windows Version 4.0
SEQ ID NOS: 17
SOCTWARE: FastSEQ for Windows Version 4.0
SEQ ID NOS: 17
SOCTWARE: Variation
LOCATION: (3677)...(3951)
COTHER INFORMATION: n can be any nucleotide
US-09-617-053A-5
                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
Search completed: November 29, 2001, 00:23:11 Job time: 9823 sec
                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 4.9%; Score 33.4; DB 4; Length 6669; Best Local Similarity 53.4%; Pred. No. 5.2; Matches 70; Conservative 0; Mismatches 61; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Korneluk, Robert G
                                                                                                                                        2826 ATGTTTCTGAA 2816
                                                                                                                                                                                                                                                 2886 ATTGTAGAGTTATTCAACTTATCACCTCCTGAAAACATTTTTGAACTTTTTGTTTTTCTAA 2827
                                                                                                                                                                                                                                                                                                                                                        280 ttctttcagga 290
| |||| || |
                                                                                                                                                                                                                                                                                 220 cttttggagttatcttcctttttcaccttgttaaaaccatatccaaggtttccctttatat 279
                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

THIS PAGE BLANK (USPTO)

4_

a

000

```
Minimum DB
Maximum DB
                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            otal number of
                                                                                                                                                         No.
                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٠.
            503.2
482.6
379
375.6
325.2
292.4
274.8
274.8
274.8
274.8
                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hits satisfying chosen parameters:
                                                                                                                                                                Query
                                                                                                                                                      Match
74.4
71.4
55.6
1.5
55.6
48.1
40.7
40.7
40.5
39.6
36.3
22.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-735-712-9
676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11351937 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                November 29, 2001, 00:18:42; Search time 1970.99 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 4.5 Copyright (c) 1993 - 2000 Comr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            em_esthum:*
em_estin:*
                                                                                                                                                                                                                                                                                                            em_gss_hum:*
em_gss_inv:*
em_gss_pln:*
                                                                                                                                                                                                                                                                                                                                                                                                         em_htc:*
                                                                                                                                                                                                                                                                                                                                                                      gb_est2:*
gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                             em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_estom:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_estfun:
                                                                                                                                                                                                                                                                                                                                                                                                                       estov:*
                                                                                                                                                                                                                                                                                                                                                                                                                                 estro: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                         m_estpl:*
                                                                                                                                                                                                                                                                                                                                               gb_gss:*
em_gss_fun:*
                                                                                                                                                                                                                                                               em_gss_other:*
                                                                                                                                                                                                                                                                          em_gss_vrt:*
                                                                                                                                                                                                                                                                                     em_gss_rod:*
                                                                                                                                                                                                                                                                                               em_gss_pro:*
                                                                                                                                                                                                                                                                                                                                                                                             gb_est1:*
                                                                                                                                                         Length
                      508
516
387
382
394
415
415
410
                                                                                                                                                         DB
                                                                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5372889281 residues
                                                                                                                                                         ij
                                                                                                        AA436088
AA416972
                                                                                                                                AI149899
                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (without alignments)
3685.532 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22703874
       AI149899 gf43h06.x
AA436088 zu03a08.r
AA416972 zt94h05.s
AA435988 zu03a08.s
AA758635 ah67b04.s
BEI07659 UI-R-BT1-
AA470059 zt94h05.r
AI012083 ot18b02.s
AA411806 zt67a03.s
AA41806 zt67a03.s
AA41806 zt67a03.s
AA41806 zt67a03.s
                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             676
```

a

ALIGNMENTS

													•	•																	•	
45	44	43	42	41	40	39	38	37	36	35	34	ω	32	<u>ω</u>	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	<u>_</u> 3
52.4	52.4	52.6	52.6	52.6	52.6	52.6	52.6	53	54.4	54.6	54.6	55	55	55.4	55.6	55.6	59.4	61.2	63.4	63.6	70.6	76.2	80.4	80.4	80.8	82.2	83	84	86.4	126.2	131.8	141
7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	8.0	8.1	8.1	8.1	8.1	8.2	8.2	8.2	8.8	9.1	9.4	9.4	10.4	11.3	11.9	11.9	12.0	12.2	12.3	12.4	12.8	18.7	19.5	20.9
755	504	735	680	619	597	594	515	1184	1504	766	697	904	528	470	947	579	715	887	899	689	421	857	562	508	517	704	218	793	1071	224	601	332
10	11	10	11	10	10	10	11	12	12	11	11	11	10	10	12	10	11	10	11	11	13	11	10	10	11	11	10	11	10	10	10	H
AI950360	BF522968	AV715678	BG546745	AV661743	AV716310	AV717594	BG434337	AK017928	AK003110	BG611537	BF056859	BG024663	BE675149	AI807884	AK008652	BE513276	BG538851	AL531049	BG720623	BG719295	B86842	BG720182	AA418443	AA234138	BG664654	BG571626	BE638321	BG484817	AL544561	BE638325	BE638317	BF319786
AI950360 wp10b06.x	BF522968 UI-R-C2p-	AV715678 AV715678	BG546745 602574115	AV661743 AV661743	AV716310 AV716310	AV717594 AV717594	BG434337 602506331	AK017928 Mus muscu	AK003110 Mus muscu	BG611537 602613441	BF056859 7k10g10.x	BG024663 602275469	BE675149 7f03d02.x	AI807884 wf43g11.x	AK008652 Mus muscu	BE513276 601315340	BG538851 602568296	AL531049 AL531049	60269188	60269036	B86842 RPCI11-26F1	60269222	zv92e05.	zr51b06	DRABGGC	6025929	BE638321 EST00013	6025055	AL54456	EST 0002	EST0000	BF319786 uy63h11.x

C 0 0

REFERENCE AUTHORS TITLE RESULT 1 AI149899/c LOCUS VERSION KEYWORDS FEATURES COMMENT SOURCE ACCESSION DEFINITION JOURNAL ORGANISM source ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. cDNA Sequencing by: Washington University Genome Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/image.html Insert Length: 742 Std Error: 0.00 Seq primer: -40ml3 fwd. ET from Amersham High quality sequence stop: 455. Tumor Gene Index Unpublished (1997) Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov AI149899 508 bp mRNA EST 10-NOV-1998 qf43h06.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1752827 x similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 508) mRNA sequence. AI149899 AI149899.1 GI:3678368 cDNA Library Preparation: M. Bento Soares, Homo sapiens EST NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anat human: /organism="Homo sapiens" /db_xref="taxon:9606" /clone="IMAGE:1752827" Location/Qualifiers . 508 Anatomy Project (CGAP), Ph.D., Sequencing Center information can .**≾** Fatima Bonaldo

be

C

000

BE107659 AA470059 AI002083 AA411806 AA781801 AQ108532

AA707529

AA707529

AA435988 AA758635

0000

```
REFERENCE
AUTHORS
                                            SOURCE
ORGANISM
                                                                              ACCESSION
VERSION
                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                  645
                                                                                                                                                                                                                                                           585
                                                                                                                                                                                                                                                                                  148
                                                                                                                                                                                                                                                                                                          525
                                                                                                                                                                                                                                                                                                                                                     465
                                                                                                                                                                                                                                                                                                                                                                                                                      328
                                                                                                                                                                                                                                                                                                                                                                                                                                            345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165
                                                                                                                                                                                                                                                                                                                               208
                                                                                                                                                                                                                                                                                                                                                                            268
                                                                                                                                                                                                                                                                                                                                                                                                405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   225
                                                                                                                                                                                                                                        88
                                                                                                                                                                                             28
                                                                                                                                                                                                                                                 | tcaattttggggtgccactcagaggattgtgattgtgaacaatgttgttgactagcactg
                                                                                                                                                                                                                                                                                                                                                                       agaaaaatgaaaatcttagggactatccagatcctgtttggaattatgaccttttctttt 224
                                                                                                                                                                                           TGAGAATAAAGATGTTTAAAATAAAAA
                                                                                                                                                                                                                 tgagaataaagatgtgttaaaataaaaa 672
                                                                                                                                                                                                                                                                                             ggaattttgattacattgatgactttcagcattattgaattattcatttctctgcctttc
                                                                                                                                                                                                                                                                                                                                        tacatttgtggttattctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttg
                                                                                                                                                                                                                                                                                                                                                                                                                     tcaggatatccattctggggctctgttttgttcattaattctggagccttcctaattgca 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATGACCTTTTCTTTT 449
                                                                                                                                                                                                                                      TCAATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTTGTTGACTAGCACTG
                                                                                                                                                                                                                                                                                 GGAATTTTGATTACATTGATGACTTTCAGCATTATTGAATTATTCATTTCTCTGCCTTTC
                                                                                                                                                                                                                                                                                                                              TACATTTGTGGTTATTCTCACCAAAATAGTCAGTGTAAGGCTGTTACTGTCCTGTTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAGGATATCCATTCTGGGGCTCTGTTTTGTTCATTAATTCTGGAGCCTTCCTAATTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     505;
                                                                             mRNA sequen
AA436088
AA436088.1
l (bases r
Hillier, L.,
                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                            Homo sapiens
                                                                    EST
                                                                                                             AA436088 516 bp mRNA EST 09-
zu03a08.rl Soares_testis_NHT Homo sapiens cDNA clone
5' similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIG
                                                         numan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
           (bases 1 to 516)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186
                                                                                                   sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρι
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="Soares_testis_NHT"
/sex="male"
/lab_host="DH10B"
Allen, M.,
                                                                               GI:2141002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
Bowles, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 503.2; DB 10
Pred. No. 4.3e-102;
0; Mismatches 3;
                     Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
Dubuque, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
``
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
Geisel, G.,
                                                                                                               ANTIGEN CD20
                                                                                                                                     09-NOV-1997
                                                                                                                          IMAGE: 730742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
Jost, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                                                 89
                                                                                                                                                                                                                                                                                                                                                                                                                    269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
         Qγ
                               В
                                                    δÃ
                                                                           В
                                                                                               Qy
                                                                                                                        밁
                                                                                                                                           Qy
                                                                                                                                                                    B
                                                                                                                                                                                        Qγ
                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                         BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
```

В

δÃ 밁 Qγ 밁

δõ

QΥ

Дδ

ρ 밁

밁

AA436088

KEYWORDS

ğ QΥ Вþ γQ 망

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 485;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                  421
                                                                                                                                                                                                                                                                                                         301
                                                                                                     380
                                                                                                                                                                    361
                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 tcatctcctttcaaattatcaccgacaccatcatggattcaagcaccgcacacagtccgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCACGACCTTTCAACTCAAAGCCCCTTGCAAAATTATTTGCTAGAAAAATGAAAATCT 199
ctggaatcattctcctcacatttggtttcatcctagatcaaaactacatttgtggttatt
                                                                                                 CAGAAACTCTGATAATATTGAGCCGAATAATGAATTTTCTTAGTGCCCTGGGAGCAATAG
                                                                                                                                    cagaaactctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatag
                                                                                                                                                                                                                                                                  ggggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaacca
                                                                                                                                                                                                                                                                                                                                                                                                           TAGGGACTATCCAGATCCTGTTTGGAATTATGACCTTTTCTTTTGGAGTTATCTTCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tagggactatccagatcctgtttggaattatgaccttttctttttggagttatcttccttt 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag
                                                                                                                                                                                                                                   GGGGCTCTGTTTTGTTCATTAATTCTGGAGCCTTCCTAATTGCAGTGAAAAGAAAAACCA
                                                                                                                                                                                                                                                                                                                                                                           TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCATCTCCTTTCAAATTATCACCGACACCATCATGGATTCAAGCACCGCACACAGTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Krizman, D., Kucaba, T., Lacy, M., I
,J., Moore, B., Schellenberg, K., &
,White, Y., Wylie, T., Waterston, R.
WashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      High quality sequence stop: 482.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IMAGE Consortium (info@image.llnl.gov) for Insert Length: 733 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This clone is available royalty-free through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Washington University Scho 4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /lab_host="pH10B"
//lab_host="pH10B"
//lab_host="pH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="GDB:5927437"
/db_xref="taxon:9606"
/clone="MAGE:730742"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 71.4%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 482.6; DB 1
Pred. No. 1.6e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            School of Medicine vay, Box 8501, St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Le,N., Lennon,G., Marra,M., Martin Steptoe,M., Tan,F., Theising,B., and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLNL ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                 439
                                                                                                                                                                                                                                   379
                                                                                                                                                                                                                                                                                                                                                                        319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79
                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
Ş
                               В
                                                         δÃ
                                                                                            В
                                                                                                                       Qy
                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA416972/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                 327
   401
                                                            341
                                                                                            387
                                                                                                       281 tctttcaggatatccattctggggctctgttttgttcattaattctggagccttcctaat 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             440
                                                                                                                                                                     Local Similarity
tagtgccctgagagcaatagctggaatcattctcctcacattttggtttcatccttagatca 460
                                              tgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatgaatcttct 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCACAAAA 508
                                                                                          TCTTAGGGGATATCCATTCTGGGGCCTCTGTTTTGTTCATTAATTCTGGAGCCTTCCTAAT 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ctcaccaaa 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGAATCATTCTCCTCACATTTGGTTTCATCCTAGATCAAAACTACATTTGTGGTTATT 499
                                                                                                                                                     382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "J., Moore,B., Schellenberg,K., Steptoe,M., Tar,F., White,Y., Wylie,T., Waterston,R. and Wilson,R. WashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
AA416972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA416972 387 bp mRNA EST 09-NOV-199: zt94h05.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:7.
3. similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hillier,L., Allen,M., Bowles,L.,
Krizman,D., Kucaba,T., Lacy,M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Insert Length: 656 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA416972.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 387)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     primer: -41m13 fwd. ET from Amersham
Location/Qualifiers
                                                                                                                                                                                                                                               138
                                                                                                                                                     Conservative
                                                                                                                                                                                                                                              מ
                                                                                                                                                                                                                                            Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo. "

77 c 67 g 105 t
                                                                                                                                                                                                                                                                                                                                /clone_lib="Soares_testis_NHT"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:9606"
/clone="IMAGE:730041"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="GDB:5926570"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .387
                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="DH10B"
                                                                                                                                                                   56.1%;
98.7%;
                                                                                                                                                     0;
                                                                                                                                                                Score 379; DB 1
Pred. No. 2e-74;
                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Le, N., Lennon, G., Marra, M., Martin
                                                                                                                                                                                 DB 10;
                                                                                                                                                     5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Louis,
                                                                                                                                                                                Length 387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hominidae;
                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Theising, B.,
                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IMAGE: 730041
                                                                                                                                                  Gaps
                              268
                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 4
AA435988/c
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
```

```
actgtgagaataaagatgtgttaaaaat 667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgttgactagc 640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTGGGAATTTTGATTACATTGATGACTTTCAGCATTATTGAATTATTCATTTCTCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cttgggaattttgattacattgatgactttcagcattattgaattattcatttctctgcc 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aaactacatttgtggttattctcaccaaaatagtcagtgtaaggctgttactgtcctgtt 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTGTGAGAATAAAGATGTGTTAAAAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTCTCAATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTTGTTGACTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAACTACATTTGTGGTTATTCTCACCAAAATAGTCAGTGTAAGGCTGTTACTGTCCTGTT 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. I Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               White,Y., Wylie,T., WashU-NCI human EST Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA435988 382 bp mRNA EST 09-NOV-1997 zu03a08.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:730742 3' similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20 ;,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Possible reversed clone: similarity on wrong Insert Length: 733 Std Error: 0.00 Seq primer: -41ml3 fwd. ET from Amersham High quality sequence stop: 280.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hillier,L., Allen,M., Bowles,L., Krizman,D., Kucaba,T., Lacy,M., J., Moore,B., Schellenberg,K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA435988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA435988.1 GI:2140902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 382)
           135
/organism="Homo sapiens"
/db_xref="GDB:5927437"
                                                                                                                                                                                                                                                            /lab_host="DH10B"
                                                                                                                                                                                                                                                                                    /sex="male"
                                                                                                                                                                                                                                                                                                       /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                               /clone="IMAGE:730742"
                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Waterston, R. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , Dubuque, T., Geisel, G., Jost, S.,
Le, N., Lennon, G., Marra, M., Martin
Steptoe, M., Tan, F., Theising, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                208
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
AA758635/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                          EFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               411 agagcaatagctggaatcattctcctcacatttggtttcatcctagatcaaaactacatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | taaagatgtgttaaaataaaaa 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ttgattacattgatgactttcagcattattgaattattcatttctctgcctttctcaatt 590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         agaaaaaccacagaaactctgataatattgagccgaataatgaatcttcttagtgccctg 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATCCATTCTGGGGCTCTGTTTTGTTCATTAATTCTGGAGCCCTCCTAATTGCAGTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ttggggtgccactcagaggattgtgattgtgaacaatgttgttgactagcactgtgagaa 650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tgtggttattctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tatccattctggggctctgttttgttcattaattctggagccttcctaattgcagtgaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAAAGATGTGTTAAAATATAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTTGTTGACTAGCACTGTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGCAATAGCTGGAATCATTCTCCTCACATTTGGTTTCATCCTAGATCAAAACTACATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAAAAACCACAGAAACTCTGATAATATTGAGCCGAATAATGAATTTTCTTAGTGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGATTACATTGATGACTTTCAGCATTATTGAATTATTCATTTCTCTGCCTTTCTCAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTGGTTATTCTCACCAAAATAGTCAGTGTAAGGCTGTTACTGTCCTGTTCTTGGGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
AA758635
AA758635.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA758635
ah67b04.s1
similar to
                                                                                                              www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 661 Std Error: 0.00
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 390
                                                                                                                                                                         CDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/ILNL at:
                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov cDNA Library Preparation: M. Bent
                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Primates; 1 (bases 1 to 394)
                                                                                                                                                                                                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                                                                                              Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                        NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                          National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .Conservative
                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="1320655"
/sex="male"
/lab_host="DH10B"
                           /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       394 bp mRNA EST 29-DEC-1
SOARES_testis_NHT Homo sapiens cDNA clone 13206
SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20
                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:2806498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55.6%;
99.0%;
                                                                                                    on/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 375.6; DB 10; Pred. No. 1.1e-73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                   M. Bento Soares, Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                     Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                       Sequencing Center information can be
                                                                                                                                                                                                                                                   .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                   Fatima
                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1320655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          263
                                                                                                                                                                                                                                                 Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ų
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
```

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
              637 tagcactgtgagaataaagatgtgttaaaaataaa
                                                                                 578
                                                                                                            154
                                                                                                                                    520
                                                                                                                                                               214
                                                                                                                                                                                        460
                                                                                                                                                                                                                  274
                                                                                                                                                                                                                                                                       334
                                                                                                                                                                                                                                                                                                341
                                                                                                                                                                                                                                                                                                                       401
34
                                                      94
TAGCACTGTGAGAATAAAGATATGTTAAAATAAA
                                                                                                         TCTTGGGAATTTAGAATACATTGATGACTTTCAGCATATATTGAATTATTCATATTCTCT
                                                                  gccttt-ctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgttgac 636
                                                                                                                                                                          aaaactacatttgtggttattctcaccaaaatagtcagtgtaaggctgttactgtcctgt 519
                                                                                                                                                                                                                             tagtgccctgagagcaatagctggaatcattctcctcacatttg-gtttcatcctagatc 459
                                                                                                                                                                                                                                                                    TGCAGTGAAAAGAAAACCACAGAAACTCTGATAATATTGAGCCGAATAATGAATTTTCT 275
                                                                                                                                                                                                                                                                                   tgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatgaatcttct 400
                                                    GCCTTTACTCAATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTAGTTGAC
                                                                                                                       tcttgggaattttgattacattgatgactttcagcat-tattgaattattcat-ttctct 577
                                                                                                                                                            AAAACTACATTTGTGATTATTCTCACCAAAATAGTCAGTGTAAGGCTGTTACTGTCCTGA 155
                                                                                                                                                                                                               TAGTGCCCTGGGAGCAATAGCTGGAATCATTCTCATCACATTTGAGTTTCATCCTAGATC 215
                                                                                                                                                                                                                                                                                                                                                                                 377;
                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133
                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           48.1%;
95.7%;
                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                           Score 325.2; DB 1
Pred. No. 1.8e-62;
                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                           670
                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                13;
                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                         Length 394;
                                                                                                                                                                                                                                                                                                                                                                                4,
                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                         95
                                                      35
                                                                                                                                                                                                                                                                                                                                                                                4;
```

```
JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
BE107659/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                  BE107659 484 bp mRNA EST UI-R-BT1-ame-d-04-0-UI.S1 UI-R-BT1 Rattus norvegicus UI-R-BT1-ame-d-04-0-UI 3', mRNA sequence.
              Contact: Soares, MB
Program for Rat Gene Discovery and Mapping
University of Iowa
451 Eckstein Medical Research Building Iowa
Tel: 319 335 8250
Fax: 319 335 9565
                                                                                                                                                        Bonaldo, M.F., Lennon, G. and Soares, M.B. Normalization and subtraction: two appr
                                                                                                                                                                                                                                       Rattus norvegicus
Eukaryota; Metazoa;
Email: msoares@blue.weeg.uiowa
                                                                                                               97044477
                                                                                                                                Genome
                                                                                                                                             discovery
                                                                                                                                                                                                                         Mammalia; Eutheria;
                                                                                                                                                                                                                                                                        Norway rat
                                                                                                                                                                                                                                                                                                      BE107659.1
                                                                                                                                                                                                                                                                                                                        BE107659
                                                                                                                                                                                        (bases 1 to 484)
                                                                                                                            Res. 6 (9),
                                                                                                                                                                                                                                                                                                       GI:8499769
                                                                                                                           791-806 (1996)
                                                                                                                                                                                                                        Chordata;
Rodentia;
                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae;
                                              Building Iowa
                                                                                                                                                        approaches
                                              City,
                                                                                                                                                          ç
                                                                                                                                                            facilitate
                                              ΙA
                                              USA
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      484
                                                                                                                                                                                 124
                                                                                                                                                                                                                                                                                                                                                                493
                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               193 agatcetgtttggaattatgaeettttettttggagttatetteetttteacettgttaa 252
                                                                                                                                                                                                                                                                                                       184
                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaaactctga 372
aaaa 676
                                                                                                                                                                                                                                                                                                                                       gtcagtgtaaggctgttactgtcctgttcttgggaattttgattacattgatgactttca 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAAAAATGAGCCAGGCGATGAATTTACTTAGTGCCCTGGGAGCAGCAGCTGGAATCATTC 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aaccatatccaaggtttccctttatatttctttcaggatatccattctggggctctgttt 312
                                                                                        gtgattgtgaacaatgttgttgactagcactgtgagaataaagatgtgtttaaaataaaaa 672
                                                                                                                                                                                 GCGTTGCTGAACTGTTCATTTCCCTCTTTTCCTCGATTTTGGGGTGCTACTCAGAAGAAA 65
                                                                                                                                                                                                           gcattattgaattattctcttgtctttttctcaattttggggtgccactcagaggatt 612
                                                                                                                                                                                                                                                                                                    TTCAGTGTGGTGCTATTACCACTCTATTTGTTGGGATTTTGATTATGTTGATGATCTTCA 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                            tcctcacatttggtttcatcctagatcaaaactacatttgtggttattcttcaccaaaata 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            taatattgagccgaataatgaatcttcttagtgccctgagagcaatagctggaatcattc 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCCATACCCAAGGTTCCCCTTTTATATTTCTCTCAGGATATCCTTTCTGGGGCCTCTGCTT 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGATCCTGTTTGGAATCATGAACTTCTCATTTTGGAGTTGTTTTCCCTTTTTCACCTTTGGTAA 425
                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTCATATGTGCTTTCCTTCTAGATGGAGAATTCATCTGTGGCTATTCTCCAGATGGTA 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence contained an oligo-dT track that was present in the oligonucleotide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. The sequence tag present in the cDNA between the NotI site and the oligo-dT track served to identify it as a clone from the normalized testis library cDNA Library Preparation: M.B. Soares Lab Clone distribution: clones will be available through Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genetics (www.resgen.com)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /lab_host="DHIOB (Life Technologies)"
/note="Vector: pT73D-Pac (Pharmacia) with a modified note: Vector: pT73D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; The library UI-R-BF1 is a subtracted library derived from a mixture of the following tissues: hippocampus, thalamus, mid-brain, medulla, corpus striatum, cerebral cortex and testis. For a detailed description of the library from which this clone was derived, please visit our web site at ratest.eng.uiowa.edu. The subtraction has been previously accepted in the library from which this contact of the library from which this clone was derived, please visit our web site at the subtraction has been previously accepted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAG_SEQ=ACGCAG"
98 c 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAG_LIB=UI-R-BT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6:791-806, 1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                described in (Bonaldo, Lennon and Soares, Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /strain="Sprague-Dawley"
/db_xref="taxon:10116"
/clone="UI-R-BT1 ame-d-04-0-UI"
/clone_lib="UI-R-BT1"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAG_TISSUE=testis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                         ATGCTGTTGAATAGCACTGTACAAGTAAAACTGCAAATTGAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        43.3%;
76.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches 106; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 292.4; DB 1
Pred. No. 3.5e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 10; Length 484;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

밁

δÃ 밁 Ş

δÃ 멍 Ωy Вþ QΥ В QΥ 밁 Qy дb Qy

```
VERSION
KEYWORDS
                       δÃ
                                                       ₽
                                                                                    QΥ
                                                                                                                   밁
                                                                                                                                           Qy
 밁
                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA470059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                          Query Match
Best Local S
Matches 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
 145
                           121
                                                        85
                                                                                    61
                                                                                                                   25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                              \vdash
                                                                                                                CCACGACCTTTTCAACTCAAAGCCCCCTTGCAAAAATTATTTGCTAGAAAAATGAAAATCT 204
             ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct 180
                                                        TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAA
                                                                      tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
                                                                                                                                                                            389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   White,Y., Wylie,T., Waterston,R. and Wilson,R. Theising,B., WashU-NCI human EST Project
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA470059 415 bp mRNA EST 09-NOV-1997 2t94h05.rl Soares_testis_NHT Homo sapiens cDNA clone IMAGE:730041 5' similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20 ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. 1 Tel: 314 286 1810

Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 415)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA470059.1 GI:2197368
                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                  129
                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                          Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo. "

96 c 67 g 123 t
                                                                                                                                                                                                                                                                                                                                                /db_xref="GDB:5926570"
/db_xref="taxon:9606"
/clone="IMAGE:730041"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                           /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                            /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                      40.78;
78.78;
                                                                                                                                                                          Score 274.8;
Pred. No. 2.96
0; Mismatches
                                                                                                                                                                            0;
                                                                                                                                                                       .8;
2.9e-51;
2;
                                                                                                                                                                                                       DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 St. Louis, MO 63108
                                                                                                                                                                                                       Length 415;
                                                                                                                                                                            103;
                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , Martin
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
AI002083/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      204
                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 tagggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttt 240
|| | | | |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cagaaactctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ggggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaacca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGAAACTCTGATAATATTGAGCCGAATAATGAATTTTCTTAGTGCCCTGGGAGCAATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGGCTCTGTTTTGTTCATTAATTCTGGAGCCTTCCTAATTGCAGTGAAAAGAAAAACCA
                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3', mRNA sequence
AI002083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AI002083 482 bp mRNA ot38b02.s1 Soares_testis_NHT 3', mRNA sequence.
                                                                                                                                                                                                                                                                        www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                        Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                    National Cancer Institute, Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Primates; Catarrhini; Hor
1 (bases 1 to 482)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AI002083.1
                                                                                                                                                                                                                                                            Insert Length:
                                                                                                                                                                                                                                                                                   DNA Sequencing by: Washington University Genome Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                          cDNA Library Arrayed by: Greg Lennon,
                                                                                                                                                                                                                                                                                                                                             Ph.D.
                                                                                                                                                                                                                                    primer: -40m13 fwd. ET from Amersham
h quality sequence stop: 393.
                                                                                                                                                                                                                                                                                                                                                      Library Preparation:
                                               (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pr73 vector. Library went through one round of normalization to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo. "
                                                                                                                                          /sex="male"
                                                                                                                                                                   /clone="IMAGE:1619019"
                                                                                                                                 /lab_host="DH10B"
                                                                                                                                                       /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                    /db_xref="taxon:9606"
                                                                                                                                                                                             organism="Homo sapiens"
                                                                                                                                                                                                                        ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:3202120
                                                                                                                                                                                                                                                            Std
                                                                                                                                                                                                                                                                                                                                                      . M.
                                                                                                                                                                                                                                                             Error: 0.00
                                                                                                                                                                                                                                                                                                                                                      Bento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens cDNA clone IMAGE:1619019
                                                                                                                                                                                                                                                                                                                                                                                                                       Genome
                                                                                                                                                                                                                                                                                                                                                      Soares,
                                                                                                                                                                                                                                                                                                                           Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                    Anatomy
                                                                                                                                                                                                                                                                                                                                                     Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -GGATATCCATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                    Project (CGAP),
                                                                                                                                                                                                                                                                                                    information
                                                                                                                                                                                                                                                                                                                 Sequencing
                                                                                                                                                                                                                                                                                                                                                     Ζ.
Bonaldo. "
                                                                                                                                                                                                                                                                                                                                                      Fatima Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                208
                                                                                                                                                                                                                                                                                                                 Center
                                                                                                                                                                                                                                                                                                  can be
                                                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                γQ
                                                                                                                                                                                                                                                                                                                                                                                                                   ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                    ₽
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
```

```
RESULT 9
AA411806/c
                                                                             VERSION
KEYWORDS
                       REFERENCE
                                                                                                                                    DEFINITION
                                                                                                    ACCESSION
                                                                                                                                                 Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
             AUTHORS
                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               482
                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                              190
                                                                                                                                                                                                                                                                                                                                                        481 ctcaccaaaatagtcagtgtaaggctgttactgtcctgttcttgggaattttgattacat
                                                                                                                                                                                                                                                                                                                                                                                          215
                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                     225
                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422
                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                      70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTAAAATAAA
                                                                                                                                                                                                                                                    cagaaactctgataatattgagccgaataatgaatcttcttagtgccctgagagcaatag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatct 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcag 120
                                                                                                                                                                                                                               ttaaaataaa 670
                                                                                                                                                                                                                                                                                                                                            CTCACCAAAATAGTCAGTGTAAGGCTGTTACTGTCCTGTTCTTGGGAATTTTGATTACAT
                                                                                                                                                                                                                                                                                                                                                                                                     ctggaatcattctcctcacatttggtttcatcctagatcaaaactacatttgtggttatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tagggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCACGACCTTTCAACTCAAAGCCCCTTGCAAAATTATTTGCTAGAAAAATGAAAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTTTCTGGTATTTCCTCCAGAAATCACTGCTTCAGAATATGAGTCCACAGAACTTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 Similarity 71.9
482; Conservative
Hillier, L.,
Kucaba, T.,
                                                                                        AA411806
AA411806.1
                                                                                                                       AA411806 410 bp mRNA
zt67a03.sl Soares_testis_NHT
zt67a03.sl Soares_testis_NHT
                                                                                                              mRNA sequence.
                                 Mammalia;
                                             Eukaryota;
                                                       Homo sapiens
                                                                               EST
                  karyota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; mmalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. (bases 1 to 410)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             نو
           Allen,M.,
                                                                                          GI:2070377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C
 Le, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
           Bowles, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 274; DB 10; Pred. No. 4.3e-51; 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ڡ
 Lennon, G.,
                                                                                                                           P11836
                                                                                                                          12-AUG-1997
Homo sapiens cDNA clone IMAGE:727372
P11836 B-LYMPHOCYTE ANTIGEN CD20 ;,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141
Dubuque,T., Ge:
n,G., Marra,M.,
                                                                                                                                                                                                                                                                                                                                                                                           GATCAAAACTACATTTGTGGTTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                       Geisel, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GGATATCCATTCT
Martin, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188;
           Jost.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                              131
                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                          191
                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
 Moore,
                                                                                                                                                                                                                                                                                                  71
                                                                                                                                                                                                                                                                                                                                                                                                                                    214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
```

Ļ

```
RESULT 10
AA781801/c
          ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                     Ş
                                                                                                                                                                                                  밁
SOURCE
                                                                       DEFINITION
                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 274; Conserv
                                                                                                                                                                                                                                                                                                                         173
                                                                                                                                                                                                                                                 290
                                                                                                                                                170
                                                                                                                                                                         353
                                                                                                                                                                                                  230
                                                                                                                                                                                                                        293
                                                                                                                                                                                                                                                                         233
                                                                                                                                                                                                                                                                                                 350
                                                                                                                                                                                                                                                                                                                                                  410
                                                                                                                                                                                                                                                                                                                                                                           113
                                                                                                                                                            aaaaaccacagaaactctgataatattgagccgaataatgaatct 397
                                                                                                                                                                                                                                                                                                              gaaaatcttagggactatccagatcctgtttggaattatgaccttttctttttggagttat 232
                                                                                                                                                AAAAACCACAGAAACTCTGGGGAATTTTGATTACATTGATGACTTT
                                                                                                                                                                                                           tccattctggggctctgttttgttcattaattctggagccttcctaattgcagtgaaaag 352
                                                                                                                                                                                                                                                 GAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATGACCTTTTCTTTTGGAGTTAT
                                                                                                                                                                                                                                                                                                                                                  ACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCTTGCAAAAATTATTTGCTAGAAAAAT 351
                                                                                                                                                                                                                                                                                                                                                              actttcagccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaat 172
                                                                                                                                                                                                  TCCATTCTGGGGGCTCTGTTTTGTTCATTAATTCTGGAGCCTTCCTAATTGCAGTGAAAAG
                                 sequence.
                                                          ai58g01.s1
similar to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T., Waterston,R. and Wilson
WashU-Merck EST Project 1997
Unpublished (1997)
Contact: Wilson RK
                                                                                   AA781801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St.
           EST
                      AA781801.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schellenberg, K., Steptoe, M., r., Waterston, R. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           147
                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:9606"
/clone="IMAGE:727372"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="GDB:5924284"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .410
                                                         389 bp mRNA EST 31-DEC-1998 Soares_testis_NHT Homo sapiens cDNA clone 1375056 SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20 ;, 1
                                                                                                                                                                                                                                                                                                                                                                                                              39.6%;
                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                              Score 267.4; DB 1
Pred. No. 1.3e-49;
                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tan, F., Theising, B., White, Y., Wylie
                                                                                                                                                                                                                                                                                                                                                                                                                          DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                  11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Louis,
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contact the
                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                        :
                                                                                                                                                                                                                                                 231
                                                                                                                                                                                                                                                                         292
                                                                                                                                                                                                                                                                                                 291
                                                                                                                                                                                                                                                                                                                                                                                                  0,:
```

```
RESULT 1
AQ108532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                               375
                                                                                                                                                                                                                             315
                                                                                                                                                                                                                                                                                                                            329
                                                                                                                                                                                                                                                                                                                                                                                                           135 actcaaagccccttgcaaaaattatttgctagaaaaatgaaaaatcttagggactatccag 194
                                                                                                                              149
                                                                                                                                                                                               209
                                                                                                                                                                                                                                                             269
                                                                                                                                                                                                                                                                                            255
                                                                                                                                                                                                                                                                                                                                                            195
                                                                                                                                                                                                                                                                                                                                                                                            389 ACTCAAAGCCCCTTGCAAAAATTATTTGCTAGAAAAATGAAAATCTTAGGGACTATCCAG 330
                                                                                                                                                                                           ttcattaattctggagccttcctaattgcagtgaaaagaaaaccacagaaactctgata 374
                                                                                                                                                                                                                                                                                                                                           atcctgtttggaattatgaccttttcttttggagttatcttcctttttcaccttgttaaaa 254
                                                                                                                              ATTTGATTACATTGATGACTTT
                                                                                                                                                           atattgagccgaataatgaatct 397
                                                                                                                                                                                                                                                                           ccatatccaaggtttccctttatatttctttcaggatatccattctggggctctgttttg 314
                                                                                                                                                                                                                                                            CCATATCCAAGGTTTCCCTTTATATTTCTTTCAGGATATCCATTCTGGGGCCTCTGTTTTG
                                                                                                                                                                                                                                                                                                                            ATCCTGTTTGGAATTATGACCTTTTCTTTTGGAGTTATCTTCCTTTTCACCTTGTTAAAA 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                           252;
AQ108532
                            cDNA Library Preparation: M. Bento Soares,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Insert Length: 983 Std Error: 0.00
Seq primer: -40m13 fwd. ET from Amersham
High quality sequence stop: 311.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Sequencing by: Washington University Genome Sequencing Clone distribution: NCI-CGAP clone distribution information found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
National Cancer Institute, Cancer Genome Anat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria;
1 (bases 1 to 389)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNA Library Arrayed by: Greg Lennon, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        140
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="1375056"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Soares_testis_NHT"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36.3%;
95.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 245.4; DB Pred. No. 1e-44; O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                            29-AUG-1998
clone 2379G7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ≅
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fatima Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

밁 δÃ

ρy

Вþ

Qy 망 ρ 밁

В

```
RESULT 12
AA707529/c
                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                          SOURCE
                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                           REFERENCE
                                                                                                                       KEYWORDS
                                                                                                                                         VERSION
                                                                                                                                                                                                      Locus
                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                 272
                                                                                                                                                                                                                                                                                              626 atgttgttgactagcactgtgagaataaagatgtgttaaaata 668
                                                                                                                                                                                                                                                                                                                                          Local Sin
                                                                                                                                                                                                                                                                               ATGTTGTTGACTAGCACTGTGAGAATAAAGATGTGTTAAAATA 314
                                                  Homo sapiens
Homo sapiens
Eukaryota; Metazoa; Chordata;
Eukaryota; Mutheria; Primates;
           NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.National Cancer Institute, Cancer Genome Anat
                                          Mammalia; Eutheria;
1 (bases 1 to 281)
                                                                                                                          EST
                                                                                                                                       AA707529.1
                                                                                                                                                         AA707529
                                                                                                                                                                      mRNA sequence.
                                                                                                                                                                                   AA707529 281 bp mRNA
ah41a12.s1 Soares_testis_NHT Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.
Seq primer: M13-21
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: mdadams@tigr.org
Clones are available from Research Genetics (info@resgen.com). BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Mark Adams
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Map Building
Unpublished (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adams, M.D., Rounsley, S.D., Zhao, S., Bass, S., Linher, K., Golden, K., Berry, K., Granger, D., Suh, E., Wible, C., Shizuya, H., Simon, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria; Primates;
1 (bases 1 to 538)
Adams, M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AQ108532.1
GSS.
                                                                                                          human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                end search
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Other_GSSs: CIT-HSP-2379G7.TR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Use of a random human BAC End Sequence Database for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Venter,J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 838 0200
301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="2379G7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cell_type="Sperm"
/note="Vector: pBeloBAC11; Site_1: HindIII; Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="CIT-HSP"
/sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                page:
                                                                                                                                         GI:2717447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:3485222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             108 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 148.6; DB 1
Pred. No. 3.3e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                        Craniata; Vo
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             175 t
                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 13; Length 538;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shizuya, H.,
                                                                          Vertebrata;
                                                                                                                                                                                                     EST
            Anatomy Project (CGAP),
                                                                                                                                                                                   ST 12-JAN-1999
cDNA clone 1292062 3',
                                                          Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                          Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence-Ready
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
JOURNAL COMMENT
                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                      RESULT 13
BF319786/c
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                         Locus
                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523 tgggaattttgattacattgatgactttcagcattattgaattattcatttcatttctctgcctt 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                  643 tgtgagaataaagatgtgttaaaataaa 670
                                                                                                                                                                                                                                                                                                                                                                                                                             28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | totcaattttggggtgccactcagaggattgtgattgtgaacaatgttgttgactagcac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTCAATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTTGTTGACTAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGAATTTTGATTACATTGATGACTTTCAGCATTATTGAATTATTCATTTCTCTGCCTT 89
                                                                                                                                                                                                                                                                                                                                                                                                                               TGTGAGAATAAAGATGTGTTAAAATAAA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       148;
Waterston, R. and Wilson, R.
The WashU-NCI Mouse EST Project 1999
Unpublished (1999)
Contact: Marra M/WashU-NCI Mouse EST
                                                                    Mammalia: Eutheria: Rodentia: Sciurognathi: Muridae: Murinae: Mus.
1 (bases 1 to 332)
1 (bases 1 to 332)
Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T.,
Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person
,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter
,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R.,
                                                                                                                                                                                                                                                                                                uy63h11.x1 McCarrey Eddy round spermatid Mus musculus cDNA clone IMAGE:3664293 3', mRNA sequence.
                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                               EST
                                                                                                                                                                                                                                                                                                                                         BF319786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 456 Std Error: 0.00
                                                                                                                                                                                       Eukaryota;
                                                                                                                                                                                                                                                                  BF319786.1 GI:11268601
                                                                                                                                                                                                                                                                                   BF319786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 1
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: -40m13 fwd. ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Preparation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1997)
                                                                                                                                                                                                                            nouse mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="1292062"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /lab_host="DH10B"
                                                                                                                                                                                       Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.9%; Score 148; DB 10; 100.0%; Pred. No. 5.2e-23; Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                     332 bp
   M/WashU-NCI Mouse EST Project 1999
                                                                                                                                                                    Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M. Bento Soares, Ph.D.,
                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequencing information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fatima Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

٨

Ĥ

.

```
RESULT 14
BE638317/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                KEYWORDS
                                                                                  VERSION
                                                                                                 ACCESSION
                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                           434
                                                                                                                                                                                                                                                                                                                                                                                                                      494
                                                                                                                                                                                                                                                                                             109
                                                                                                                                                                                                                                                                                                                                                           169
                                                                                                                                                                                                                                                                                                                                                                          374 aatattgagccgaataatgaatcttcttagtgccctgagagcgcaatagctggaatcattct 433
                                                                                                                                                                                                                              49
                                                                                                                                                                                                                                            tcagtgtaaggctgttactgtcctgttcttgggaattttgattacattg
                                                                                                                                                                                                                                                                                           CCTCATATTTGGCTTCCTAGATGGGGAATTCATCTGTGGCTATTCTCCAGATGGTAT 50
                                                                                                                                                                                                                                                                                                            cctcacatttggtttcatcctagatcaaaactacatttgtggttattctcaccaaaatag 493
                                                                                                                                                                                                                            GCAGTGTGGTGTTATTACCATTCTATTCATTGGGATTTTGGTTATGTTG
                                                                                                                                                                                                                                                                                                                                                         AAAAATGAGCCGGGCAATGAATTTACTTAGTGCTCTGGGAGCAGCAGCTGGAATCATTCT 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         174;
                                                                                            EST 28-AUG-200 EST00003 mouse testis apoptosis subtraction cDNA library Mus musculus cDNA clone MTA03 5', mRNA sequence.
                Mus musculus
Eukaryota; Me
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                               BE638317.1 GI:9932060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                  house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop: 313.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGI:1425061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   References: J. Androl. 20:635-639 and Gene 25:263-269. Library constructed and donated by J. McCarrey, Ph.D. (Southwest Foundation for Biomedical Research, Dept. of Genetics); excision done by E.M. Eddy, Ph.D. (National Institutes of Health, National Institute of Environmental Health Sciences). Original lambda-based library is available through ATCC, catalog #63423."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
/clone="IMAGE:3664293"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="round spermatids, pooled from multiple mice"
/dev_stage="60_day"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="McCarrey Eddy round spermatid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /strain="CD-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.9%;
76.0%;
Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 141; DB 11;
Pred. No. 1.8e-21;
0; Mismatches 55;
Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 332;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                            542
                                                                                                                                             28-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                JOURNAL
COMMENT
                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
COMMENT
                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QY
                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                         BE638325/c
                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
```

ρ В ρy 망 δÃ

В

```
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  389 aatgaatcttcttagtgccctgagagcaatagctggaatcattctcctcacatttggttt 448
                                                                                                                                                                                                                                                                                                                                                                                                                           569 catttctctgcctttctcaatttttggggtgccactcagaggattgtgattg 619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247 AATGAATTTACTTAGTGCTCTGGGAGCAGCAGCTGGAATCATTCTCCTCATATTTGGCTT 188
                                                                                                                                                                                                                                                                                                                                                                                                        67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         catcctagatcaaaactacatttgtggttattctcaccaaaaatagtcagtgtaaggctgt 508
                                                                                                                                                                                                                                                                                                                                                                                                        TACCATTCTATTCATTGGGATTTTGGTTATGTTGATGATCTTCAGCATTGTTGAACTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tactgtcctgttcttgggaatttttgattacattgatgactttcagcattattgaattatt 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        169;
                                  cDNA library
Unpublished (2000)
Contact: Jiang H
                                                                                                                                                                                                                                   EST00022 mouse testis apoptosis subtraction musculus cDNA clone MTA22 5', mRNA sequence. BE638325.1 GI:9932068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hunan Medical University
88 Xiangya road, Changsha, Hunan 410078, China
Tel: 086-0731-4897661
Fax: 086-0731-4497661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (2000)
Contact: Jiang H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jiang, H., Li, L. and Lu, G. Expressed sequence tags from mouse testis apoptosis subtraction
                   Department of
                                                                                        Jiang, H., Li, L. and Expressed sequence
                                                                                                                            Mammalia; Eutheria;
1 (bases 1 to 224)
                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                                                              BE638325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: lj12@public.cs.hn.cn
Seq primer: T7 Promoter Primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Department of Pharmacology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 601)
                                                                                                                                                                                                     house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 19.5%;
Similarity 73.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
Medical University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /lab_host="JM109"
/note="Vector: pUCm-T"
158 c 146 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /strain="C57BL"
/db_xref="taxon:10090"
/clone="MTA03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /cell_type="spermatogenesis cells"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="testis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="mouse testis apoptosis subtraction cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                224 bp
                                                                                                             and Lu,G.
                                                                                        tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 131.8; DB 1
Pred. No. 1.8e-19;
0; Mismatches 62
                                                                                          from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                          mouse
                                                                                          testis apoptosis subtraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                         28-AUG-2000
cDNA library Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                        Query Match 18.7%; Score 126.2; DB 10; Length 224; Best Local Similarity 76.4%; Pred. No. 3.9e-18; Matches 155; Conservative 0; Mismatches 48; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                   E COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
177 atcttagggactatccagatcctgtttggaattatgaccttttctttttggagttatcttc 236
                                                                                                                                                                                       117 tcagccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaa 176
                                                                                                                                                                                                                                       144 ACAGCCACAGCCTATAATCCCCAAAACCGAGTGCAGAAGATCATTATTAGAAAATTGGAG 85
                                                                                  ATCTTAGGGACCACCCAGATCCTGTTTGGAATCATGAACTTTTCATTTGGAGTCATTTTC 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88 Xiangya road, Changsha, Hunan 410078, China
Tel: 086-0731-4805036
Fax: 086-0731-497661
Email: 1j12@public.cs.hn.cn
Seq primer: T7 Promoter Primer
Seq primer: T7 Promoter Primer
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                      58 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="testis"
/cell_type="spermatogenesis cells"
/dev_stage="adult"
/lab_host-"JM109"
/note="Vector: pUCm-T"
40 c 61 g 65 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism-"Mus musculus"
/strain="057BL"
/db_xref="taxon:10090"
/clone="MTA22"
/clone=11b-"mouse testis apoptosis subtraction cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ibrary"
                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                          0;
```

Search completed: November 29, 2001, 00:18:44 b time: 9881 sec

Qy

밁

οy В

밁

В

δÃ

Ş

```
Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                al number of hits satisfying chosen parameters:
  November 28, 2001, 21:32:37; Search time 1789.67 Seconds (without alignments) 4148.100 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                          GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1472140 seqs, 8248589755 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-735-712-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             atggattcaagcaccgcaca.....attgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                 gb_pat:*
gb_ph:*
gb_pr:*
                                                                                                                                                                                                                                                                                                                                                                 gb_om:*
em_fun:*
em_ln:*
em_om:*
em_ov:*
em_ov:*
em_pat:*
em_pl:*
em_pl:*
em_pl:*
em_yi:*
em_yi:*
em_yi:*
em_yi:*
em_htgo_inv:*
                                                                                                                                                                                                                                                                                gb_ro:*
gb_sts:*
gb_sy:*
                                                                                                                                                                                                                                              gb_un:*
gb_vi:*
em_ba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2944280
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES SOURCE	RESULT 1 AX179787 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS		NO. 10 10 11 11 11 11 11 11 11 11 11 11 11	Result
hum Hom Euk Mam Mam Hum hav Pat Lex	AX1 Seq AX1 AX1		0 - 444440111111111111111111111111111111	
n. sapie ryota; alia; bases e,D.W. n memb n memb nt; WC con Ge	79787 uence 7 79787 79787.1		- C - C - C - C - C - C - C - C - C - C	Query
Meta Meta to and and 1099 0146 etic cati	450 from P GI:15		Length 603 676 691 697 417 138097 1138097 1138097 1166820 161039	
n="	bp ate			
Chordata; Craniata; Primates; Catarrhini rr,C.A. ins and polynucleoti d20 proteins and ige 7 28 -UN-2001; orporated (US) alifiers Homo sapiens"	DNA nt WO0146417.	ALIGNMENTS	IID AX179787 AX179789 AX179789 AX179789 AX179785 AX179785 AC027787 AC027788 AC027788 AC027788 AC027788 AC027788 AC022654 AC022654 AC022654 AC022654 AC027768	
Verte ; Hom des e	PAT			
tebrata; Euteleostomi; ominidae; Homo. encoding the same ceptors	06-AUG-2001		AX179787 Sequence AX179781 Sequence AX179781 Sequence AX179781 Sequence AX179789 Sequence AF237907 Homo sapi AF237907 Homo sapi AF237907 Homo sapi AC027787 Homo sapi AC027787 Homo sapi AC027787 Homo sapi AC03787 Homo sapi AC03787 Homo sapi AC03787 Homo sapi AF367473 Homo sapi AF237912 Homo sapi AF237912 Homo sapi AF237912 Homo sapi AF237912 Homo sapi AF237917 Homo sapi AF237917 Homo sapi AF237917 Homo sapi AF237918 Sequence AX101306 Sequence 3AF082014 Sequence 3AF082014 Sequence 3AF082014 Sequence 3AF082014 Sequence 5AF280401 Mus musce 125809 Sequence 5AF280401 Mus musce 109687 Sequence 3AF082014 Sequence 5AF280401 Mus musce 109687 Sequence 5AF280401 Mus musce 109687 Sequence 3AF082014 Sequence 5AF280401 Mus musce 109687 Sequence 3AF082014 Sequence 3	

```
BASE COUNT
ORIGIN
          Š
                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                            DEFINITION ACCESSION
                                                                                                                                                                                                                                                                      RESULT
AX179781
                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                            \Omega_{\mathbf{y}}
                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                 DЪ
                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                           Query Match
Best Local S
Matches 354
                                                                                                                                                                                                                                                               LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                    ERSION
                                                                                                                                                                                                        WORDS
RCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Sin
Matches 450;
                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                 361
                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ب
atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                      gaggattgtgattgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                                                     actttcagcattattgaattattcatttctctgccttttctcaattttggggtgccactca 420
                                                                                                                                                                                                                                                                                                           GAGGATTGTGATTGTGAACAATGTTGTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                  ACTITCAGCATTATTGAATTATTCATTTCTCTGCCTTTCTCAATTTTGGGGTGCCACTCA
                                                                                                                                                                                                                                                                                                                                                                               Human membrane proteins and polynucleotides encoding the having homology to cd20 proteins and ige receptors Patent: WO 0146417-A 1 28-JUN-2001; Lexicon Genetics Incorporated (US)
                                                                                                                                                                   Eukaryota; Metazoa; Chorda
Mammalia; Eutheria; Primat
1 (bases 1 to 603)
Walke, D.W. and Turner, C.A.
                                                                                                                                                                                                                                            AX179781 603 bp DNA Sequence 1 from Patent WO0146417. AX179781
                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                   AX179781.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:9606"
a 94 c 77 g
                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
125 c 104 g 21
                                                                                                                                                                                                                                   GI:15132144
                                   77.2%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                      Chordata;
Primates;
                            0;
                           Score 347.4; DB 6;
Pred. No. 2.5e-67;
0; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 450; DB 6; I
Pred. No. 4.7e-90;
Pred. No. 4.7e-90;
                                                                                                                                                                                                                                                                                                            450
                                                                                                                                                                                    Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                  212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               159
                                                                                                                                                                                                                                                            PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 450;
                           Indels
                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                              603;
                                                                                                                                                                                              Euteleostomi;
                           0
                                                                                                                                                                                      Ното
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
BASE COUNT
ORIGIN
                        В
                                          Qy
                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
AX179789
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
  δ
                                                                    뫄
                                                                                                             B
                                                                                                                                  Q
                                                                                                                                                         Ъ
                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΩÝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                              Query Match
Best Local (
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                      source
   241
                        213
                                              181
                                                                    153
                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                              93
                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                         33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                  1 atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Н
                   tcagaatatgagtccacagaactttcagccacgacctttcaactcaaagccccttgcaa 120
tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                            aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatt
                                                                AAATTATTTGCTAGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATG
                                                                                                                                                       ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATCT 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAATTATTTGCTAGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCCTTGCAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                              AX179789
Sequence 9 f
AX179789
AX179789.1
                                                                                                                                                                                                                                                                                                          Human membrane proteins and polynucleotides encoding having homology to cd20 proteins and ige receptors Patent: WO 0146417-A 9 28-JUN-2001; Lexicon Genetics Incorporated (US)

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 676) Walke, D.W. and Turner, C.A.
                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                         human.
                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria;
                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
140 c 112 g 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    from
                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:15132148
                                                                                                                                                                                                              77.2%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 676 bp DNA
Dm Patent WO0146417
                                                                                                                                                                                                                                                                                                                                                                                         Chordata;
Primates;
                                                                                                                                                                                                  Score 347.4; DB 6;
Pred. No. 2.5e-67;
0; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                   231 t
                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                        676;
                                                                                                                                                                                                  0;
                                                                                                                                                                                                 Gaps
300
                     272
                                         240
                                                               212
                                                                                      180
                                                                                                                                                       92
                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                 0
```

```
JOURNAL MEDLINE REFERENCE AUTHORS TITLE JOURNAL REFERENCE AUTHORS TITLE JOURNAL JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
AB013103
LOCUS
 멍
                     S
S
                                                B
                                                                    Qy
                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                               Query Match
Best Local S
Matches 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OURCE
DRGANISM
                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                     source
  112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            273
                        61
                                                52
                                                                       1
           tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                             atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    acttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ttcctaattgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCCTTGCAA
                                             ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCTAATTGCAGTGAAAAGAAAAACCACAGAAACTCTGATAATATTGAGCCGAATAATG
                                                                                                                                                                                                                                                                                                                                                                                         Submitted (20-APR-1998) Kenichi Ishibashi, Tokyo Medical and University, 2nd Internal Medicine; Yushima 1-5-45, Bunkyo, To 113-8519, Japan (E-mail:kishibashi.med2@med.tmd.ac.jp, Tel:81-3-5803-5223, Fax:81-3-5803-0132)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ishibashi,K., Sasaki,S
Cloning of three CD20
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 (bases 1 to 691)
Ishibashi, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens mRNA
AB013103
AB013103.1 GI:115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ishibashi,K., Suzuki,M., Sasaki,S. and Imai,M. Identification of a new multigene four-transmembrane family (MS4A) related to CD20, HTm4 and beta subunit of the high-affinity IgE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens testis cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MS4A5; CD20-like
                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (sites)
                                                                                                                                                                     195
                                                                                              77.2%; ilarity 97.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       264 (1),
                                                                                                                                                                     ρ
                                                                                                                                                      /gene="MS4A5"
52. .654
                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
/tissue_type="testis"
                                                                                                                                                                                                                                                                                /gene="MS4A5"
                                                                                                                                                                                                                                                                                                                                                                                ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:11559213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sasaki,S. and Marumo,
ee CD20 homolog from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87-93 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for MS4A5,
                                                                                               0,
                                                                                              Score 347.4; DB 9;
Pred. No. 2.5e-67;
0; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         putative
                                                                                                                     Length
                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           calcium
                                                                                              0;
                                                                                             Gaps
                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                               Dental
                                                                                               0;
                   Qy
                                             DЬ
                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뫄
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
```

t

```
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
AF237907
                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL MEDLINE
                                                                                                                Query Match
Best Local Similarity
                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                       source
115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           412 AATTT 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                        61
                                                 55
                                                                          ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ഗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatt
          tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                               atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCCTTGCAA
                                                 ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens |
AF237907
AF237907.1 G
                                                                                                                                                                                                                                                                                                                                                                Dr.,
                                                                                                                                                                                                                                                                                                                                                                                         Liang, Y. and Tedder, T.F. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                          Submitted (24-FEB-2000) Immunology,
                                                                                                                                                                                                                                                                                                                                                                                                                              Genomics 72 (2), 119-127
21295030
                                                                                                                                                                                                                                                                                                                                                                                                                                                        mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liang, Y. and Tedder, T.F.
Identification of a cd20-, fcepsilonribeta-,
family: sixteen new ms4a family members expre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota;
Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 694)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 694)
                                                                                                                                                                               198
                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                               Durham, NC 27710,
                                                                                                                                                                               þ
                                                                                                                                                                       /Godon_start=1
/product="MS4A5 protein"
/protein_id="AAK37416.1"
/protein_id="AAK37416.1"
/protein_id="AAK37416.1"
/db_xref="GI:13649401"
/translation="MOSSTAHSPVFLVFPPPEITASEXESTELSATTFSTQSPLQKLFA
RKMKILGTIQILFGIMTFSFGVFFLFTLKKPYPRFFFIFLSAYFRGSVLFINSGAFL
IAVKRKTETLLILLERIMNFLSALGALAGIILLTFGFFLDQNYICGYSHQNSQCKAVT
VLFLGILITLMTFSIIELFISLPFSILGCHSEDCDCEQCC"
a 143 c 116 g 237 t
                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
55...657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:13649400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             694 k
MS4A5
                                                                                                                77.2%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp mRN
5 protein
                                                                                                   0
                                                                                                   Score 347.4; DB 9;
Pred. No. 2.5e-67;
0; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                            (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complete
                                                                                                                                                                                                                                                                                                                                                                              Duke
                                                                                                     11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eta-, and htm4-related expressed in human and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRI
te cds
                                                                                                                                                                                                                                                                                                                                                                              Medical
                                                                                                     Indels
                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                              Center,
                                                                                                                            694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
Homo.
                                                                                                  0;
                                                                                                  Gaps
174
                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                     0,
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
AF321127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db
                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rocus
   Query Match
Best Local Similarity
Matches 354; Conserv
                                                                                                                                                                                                                                                                                                                                                    JOURNAL MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                        TURES
                                                                                                                                                                                                      gene
                                                                                                                                                                                 CDS
                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tttatatttctttcaggatatccattctggggctctgtttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTATATTTCTTTCAGGATATCCATTCTGGGGCTCTGTTTTGTTCATTAATTCTGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCTAATTGCAGTGAAAAGAAAAACCACAGAAACTCTGATAATATTGAGCCGAATAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complete
AF321127
                                                                                                                                                                                                                                                                                                                                          21092614
2 (bases
                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 697)

Hulett, M.D., Pagler, E., Hornby, J.R., Hogarth, P.M., Eyre, H.J., Baker, E., Crawford, J., Sutherland, G.R., Ohms, S.J. and Parish, C.R. Isolation, tissue distribution, and chromosomal localization of a novel testis-specific human four-transmembrane gene related to CD20 and FcepsilonRI-beta Biochem. Biophys. Res. Commun. 280 (1), 374-379 (2001)
                                                                                                                                                                                                                                                                                   Hulett,M.D.
Direct Submission
Direct Submission
Submitted (14-NOV-2000) Division of Immunology and Cell Biology,
John Curtin School of Medical Research, Mills Road, Canberra, ACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens testis-expressed transmembrane-4 complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF321127.1 GI:12698681
                                                                                                                                                                                                                                                                                                                                       (bases 1 to 697)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  419
                                                                    199
   Conservative
                                                                    Ω
                                                                  /translation="MDSSTAHSPVFLVFPPEITASEYESTELSATTFSTQSPLQKLFA RRMKILGTIQILFGIMTFSEGVIFLFFLLKPVPRFPFIFLSGVPFWGSYLFINSGAFL IAVKRKTTETLILILSRIMNELSALGAIAGIILLTFGFILDQNYICGYSHQNSQCKAVT VLLLGILITLMTFSIIELFISLPFSILGCHSEDCDCEQCC"

102 237 t
                                                                                                                                                                                  /gene="TETM4"
57. .659
                                                                                                                        /codon_start=1
/product="testis-expressed transmembrane-4
/protein_id="ask01641_1"
/db_xref="GI:12698682"
                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                      /map="11q12"
1. .697
                                                                                                                                                                                                                            /chromosome="11"
                                                                                                                                                                    /gene="TETM4"
                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                              . 69
                                                                                                                                                                                 . 659
           77.2%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ďď
Score 347.4; DB y;
Pred. No. 2.5e-67;
""" matches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
 Indels
                      Length 697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-FEB-2001
                                                                                                                                              protein"
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TETM4)
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA,
0
        δÃ
                                밁
                                                    γQ
                                                                                              Qy
                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
AX179785
                                                                          밁
                                                                                                                     В
                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                   source
          181
                                121
                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                           61
                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                       1
                                                                                                                                            <u>-</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acttt 365
                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                AX179785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                   115
```

```
Query Match 75.7
Best Local Similarity 94.1
Matches 354; Conservative
accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                      aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                       AAATTATTTGCTAGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ttcctaattgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAATTATTTGCTAGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5
AX179785
AX179785.1
                                                                                                                                                                                                                                                                                                        Human membrane proteins and polynucleotides having homology to cd20 proteins and ige rec Patent: WO 0146417-A 5 28-JUN-2001; Lexicon Genetics Incorporated (US)
Location/Qualifiers
1. 417
                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria; Primat
1 (bases 1 to 417)
Walke,D.W. and Turner,C.A.
                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
91 c 69 g 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from
                                                                                                                                                                                                                                                                                                                                                                                                                         Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:15132146
                                                                                                                                                                                                      75.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17 bp
1 Patent
                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
Primates;
                                                                                                                                                                                            0;
                                                                                                                                                                                          Score 340.8; DB 6;
Pred. No. 7.2e-66;
0; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO0146417
                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                      142 t
                                                                                                                                                                                                                                                                                                                                                         des encoding receptors
                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae;
                                                                                                                                                                                            Indels
                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                   417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                             Homo
                                                                                                                                                                                         Gaps
              240
                                       180
                                                               180
                                                                                                                                         60
                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                          0
```

밁

망 Ş В Q

δÃ

```
REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
AC027787
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CESSION
RSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Grand-Pierre, N., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Iliev, I., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., McIdrim, J., Meneus, L., Mihova, T., Miranda, C., Mienga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Nell, D., Olivar, T. M., Oliver, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Fisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Travers, M., Trigilio, J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Zainoun, J., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTCTCACCAAAATAG 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ttcctaattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTTTTCTTTTGGAGTTATCTTCCTTTTCACCTTGTTAAAACCATATCCAAGGTTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acttcagcattattg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCCTAATTGCAGTGAAAAGAAAAACCACAGAAACTCTGATCAAAACTACATTTGTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (01-APR-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Aug 18, 2000 this sequence version replaced gi:7382629. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dodge, S., Domino, M., Doyle, M., Ferreira, P., FitzHugh, W., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grand-Pierre, N., Grant, G., Hagos, B., Haeford, A., Horton, I., Hagos, B., Hagos, C., Kann, L., Kann, L., Kann, J., Kann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Anderson, S., Baldwin, J., Barna, N., Bastien, V., Beda, F., Boguslavkiy, L., Boukhgalter, B., Brown, A., Burkett, G., Campopiano, A., Castle, A., Choepel, V., Colangelo, M., Collins Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Collymore, A., Cooke, P., DeArellano, K., Cooke, P., DeArellano, Cooke, P., D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AC027787 138097 bp
Homo sapiens chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://ftp.genome.washington.edu/RM/RepeatMasker.html
----- Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Birren, B., Linton, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Birren, B., Linton, L., Nusbaum, C. and Lander, E. Homo sapiens chromosome 15, clone RP11-196E16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HTG; HTGS_PHASEO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE SAMPLING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC027787.2 GI:9845160
NOTE: This record contains 163 individual sequencing reads that have not been assembled into contigs. Runs of N are used to separate the reads and the order in which they appear is completely
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 138097)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 138097)
                                                                                                                                                                                                                                                                                                                      Center project name: L9008
Center clone name: 196_E_16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center: Whitehead
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        376
                                                                                                                                                                                                                                                                                                                                                                                                                                    Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Institute/ MIT Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nusbaum, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sbaum,C., Lander,E., Abraham,H., Allen,N.,
Barna,N., Bastien,V., Beda,F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A HTG 18-AUG-2000
clone RP11-196E16 map 15, LOW-PASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goyette,M., Graham,L.,
B., Heaford,A., Horton,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Collins, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gage, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
```

```
* will be sequenced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  arbitrary. Low-pass sequence sampling is useful for identifying clones that may be gene-rich and allows overlap relationships among clones to be deduced. However, it should not be assumed that this clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            will be sequenced to completion. In the event th the record is updated, the accession number will
                                                                                                                                                                                                                                                                                           13390 13489: gap of 100 bp 13490 14186: contig of 697 bp 14187 14286: gap of 100 bp 14287 14996: contig of 710 bp 14997 15096: gap of 100 bp 15997 15796: contig of 700 bp 15997 15896: gap of 100 bp 15897 16583: contig of 687 bp 16584 16683: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7141 7837; contig of 697 bp
7838 7937; gap of 100 bp
7938 8632; contig of 695 bp
8633 8732; gap of 100 bp
8733 9430; contig of 688 bp
9431 9530; gap of 100 bp
9531 10214; contig of 684 bp
                                                                     23696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10215 10314:
                                                        24392 24491:
                                                                                23596 23695:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              10981 11080:
                                                                                                                             22043 22142:
                                                                                                                                                                                                                        18963 19062:
                                                                                                                                                                                                                                                18179 18278:
                                                                                                                                                                                                                                                                                                                                                                                                                 12583 12682:
                                                                                                                                                                                                                                                                                                                                                                                                                                       11784 11883:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1465 1564:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7041 7140:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           664 763:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 3142: gap of 100
3 3820: contin 100
                                                                                                                                                                                                                                                      1 16683: gap of 100 bp
17376: contig of 693 bp
17476: gap of 100 bp
18178: contig of 702 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100 bp
0234: contig of 711 k
6334: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5423: contig of 5523: gap of 10
                                                                                                                                                                            20536:
                                                                                                                                                                                                   19773:
                                                                                                                                                    21333:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4726:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3920:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2368: gap of 3042: co
                                 25290:
                                                                                                                                                                                                        8278: gap of 100 bp
18962: contig of 684 bp
9062: gap of 100 bp
19673: contig of 611 bp
                                                                                                                                                                                                                                                                                                                                                                                                                        0314: gap of 100 bp
10980: contig of 666 bp
1080: gap of 100 bp
11783: contig of 703 bp
1883: gap of 100 bp
12582: contig of 699 bp
2515,
290: gap or
25981: contig of
                                                                                     23595: cont
                                       25190: ~~
                                                               24391: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20: gap of
4626: con
                                                                                                                                                  20436: contig of 663 bp
336: gap of 100 bp
21233: contig of 697 bp
333: gap of 100 bp
                                                                                                                                    33: gap of 100 r
22042: contig of 709
                                                                                                                                                                                    73: gap of 
20436: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           %: gap of 5423: con
                                                                                                              42: gap of
22808: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            663: contig of 663 bp in length: gap of 100 bp 1464: contig of 701 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                   82: gap of 100 bp
13389: contig of 707 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2268:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                040: contig of 706
                                        contig of 699
                                                                  contig
                                                                                      contig of 687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig of
                                                                  100 b
of 696
                                                                                                                100 bp
                      of 691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100 bp
of 697 l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100 bp
of 678 h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 bp
of 674 l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
                                                                                                                                                                                                  100 bp
                                           φd
                                                                  dq
                                                                                                               đq
                                                                                                                                       đđ
                                                                                                                                                                                                             þp
                                                                                                                                                                                                                                     đđ
                                                                                                                                                                                                                                                                                 đđ
                                                                                                                                                                                                                                                                                                        đq
                                                                                                                                                                                                                                                                                                                               đq
                                                                                                                                                                                                                                                                                                                                                       dα
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ďq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           þþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ģ
                                                                                                                                                              đq
                                                                                                                                                                                      dq
                                                                                                                                                                                                                                                           đđ
                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                      ďď
                                                                                                                                                                                                                                                                                                                                                                                                                           þþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                    đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          đđ
                                                                                                                                        in
                                                                                                                                                              in
                                                                                                                                                                                                                                                           ä
                                                                                                                                                                                                                                                                                                                                'n
                                                                  'n
                                                                                                                 ij
                                                                                                                                                                                       in
                                                                                                                                                                                                              in
                                                                                                                                                                                                                                   in length
                                                                                                                                                                                                                                                                                   'n
                                                                                                                                                                                                                                                                                                         in length
                                                                                                                                                                                                                                                                                                                                                       in length
                                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                                                                                                                                                      in length
                                                                                                                                                                                                                                                                                                                                                                                                                           in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                  in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in length
                                           in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in length
                                                                                                                                       length
                                                                                                                                                                                    length
                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                length
                                                                                                               length
                                                                                                                                                              length
                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           that
```

'n

length

```
46684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42680
42780
                                                                                                                                                       50785
                                                                                                                                                                                                                                                                                                                                                                                   4598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29185
                                                                                                                                           100 bp in 1
078 49177: contig of 687 bp in 1e
078 49177: gap of 100 bp
178 49879: contig of 702 bp in 1en
80 49979: gap of 100 bp
30 50684: contig of 705 bp in 1en
5 50784: gap of 100 bp
5 51507.
                                 8 52320: contig of 713 bp
11 52420: gap of 100 bp
12 53133: contig of 713 bp
14 53233: gap of 100 bp
14 53933: contig of 700 bp
                                                                                                                              51507: contig of 723
51607: gap of 100 1
                                                                                                                                                                                                                                                                                                                        47581:
                                                                                                                                                                                                                                                                                                                                                           46783:
                                                                                                                                                                                                                                                                                                                                                                                                45980:
                                                                                                                                                                                                                                                                                                                                                                                                                                   45188:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44395:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43600:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42779:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41991:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41187:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38772: gap of 1
39475: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37992:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36308: contig of 725 bp in
36408: gap of 100 bp
37108: contig of 700 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35583:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34835:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34051:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33257: gap of 
33951: con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40390:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39575:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37208:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32460:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31665:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30875:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30083:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28477:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26765:
26865: gaj
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41087: contig of 697 bp in 1
41187: gap of 100 bp
41187: gap of 100 bp
41991: contig of 704 bp in ler
1991: gap of 100 bp
42679: contig of 688 hp
779: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29284: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27663:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36308: Jon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38672:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28377 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27563.
                                                                                                                                                                                                                                                                                                                    46683: contig of 703 i
783: gap of 100 bp
47481: contig of 698 i
47481 i contig of 698 i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33157:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . gap \
30775:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37892:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51: gap of 100 pp
34735: contig of 684 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31565:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77: gap of 29184: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                       45088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14295:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32360:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29983:
                                                                                                                                                                                                                                                                                8290: contig of 709
                                                                                                                                                                                                                                                                                                                                                                                                                    :0885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 bp
1679: contig of 688 bp in length
3: gap of 100 bp
1500: contig of 721 bp in length
3: gap of 100 bp
1: gap of 100 bp
295: contig of 695 bp in length
                                                                                                                                                                                                                                                                                                                                                                                        ชบ: contig of
gap of ใ
                                                                                                                                                                                                                                                                                                                                                                                                                               gap of 100 l
88: contig of 693
                 gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig of points of the continuous continuou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                p of 100 bp contig of 648 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contig of 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig of 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig of 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contig of 684
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig of 684 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          contig of 692 bp in
 0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 707
                                                                                                                                                                                                                                                                                                                                            if 692 bp 100 bp 100 bp in length
                                                                                                                                                                                                                                                                                 100 bp
100 bp
709 bp in 1
                                                                                                                                                                                                                                                                                                                                                                                            100 bp
100 bp
192 bp in ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 bp
of 693 bp
                                                                                                                                                                                                                                                                                                                                          100 bp
f 698 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
[715 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 bp
703 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          694 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 þ
bp in
                                    bp in length
                                                                       bp in
                                                                                                              bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                                                     length
length
                                                                         Length
                                                                                                              length
                                                                                                                                                   length
                                                                                                                                                                                      length
                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
```

Query Match

34.1%;

Score

153.4;

B

2;

Length 138097;

```
JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Db 109656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 109596 ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 109655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC027787/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 157; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 aaattatttgctagaaaaatgaaaatcttagggactatccaga 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagcccctttgcaa 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grand-Pierre, N., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Iliev, I., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Murphy, T., Naylor, J., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Ollvar, T. M., Oliver, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Travers, M., Trigilio, J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Zainoun, J., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens chromosome 1
SEQUENCE SAMPLING.
ACC27787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCCTTGCAA 109715
* NOTE: This record contains 163 individual
* sequencing reads that have not been assembled into
* contigs. Runs of N are used to separate the reads
                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Submitted (01-APR-2000) Whitehead Institute/MIT Center for Submitted (01-APR-2000) Whitehead Institute/MIT Center for Research, 320 Charles Street, Cambridge, MA 02141, USA On Aug 18, 2000 this sequence version replaced gi:7382629.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birren,B., Linton,L., Nusbaum, C., Landerson,S., Baldwin,J., Barna,N., Bastien,V., Beda,F., Anderson,S., Baldwin,J., Barna,N., Brown,A., Burkett,G., Boukhgalter,B., Brown,A., Burkett,G., Colangelo,M., Col
                                                                                                                                                                                                                                                                                                                                                                                  On Aug 18, 2000 this sequence recommended using RepeatMasker:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Boguslavkly,L., Boukhgalter,B., Brown,A., Burkett,G., Campopiano,A., Castle,A., Choepel,Y., Colangelo,M., Co. Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz.
                                                                                                                                                                                                                                                                                                                                         Smit, A.F.A. & Green, P. (1996–1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dodge,S., Domino,M., Doyle,M., Ferreira,P., FitzHugh,W., Gage,D., Galagan,J., Gardyna,S., Ginde,S., Goyette,M., Graham,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Birren, B., Linton, L., N
Homo sapiens chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC027787.2 GI:9845160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia; Eutheria; Pr
1 (bases 1 to 138097)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HTG; HTGS_PHASEO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 138097)
                                                                                                              Center project Information Center project name: L9008 Center clone name: 196_E_16
                                                                                                                                                                                             Web site: http://www-seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                          Center code: WIBR
                                                                                                                                                                                                                                                                                        Center: Whitehead Institute/ MIT Center for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96.3%;
                                                                                                                                                                                                                                                                                                                     Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nusbaum, C. and Lander, E. me 15, clone RP11-196E16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 2.8e-24;
0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A HTG 18-AUG-2000 clone RP11-196E16 map 15, LOW-PASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Abraham, H., Allen, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Collins, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , J.S.
                                                                                                                                                                                                                                                                                        Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tor Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
and the order in which they appear is completely arbitrary. Low-pass sequence sampling is useful for identifying clones that may be gene-rich and allows overlap relationships among clones to be deduced. However, it should not be assumed that this clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       will be sequenced to completion. In the event the record is updated, the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         preserved.
                                                                                                                                                                                                                                                                                                            10

584 16683: gap of 10

184 17376: contig of 65

77 17476: gap of 100

77 18178: contic - - - 100

9 18278: contic - - - 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 13389: contig of 7
10 13489: gap of 10
14186: contig of 6
17 14286: gap of 10
17 14286: contig of 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11 11080: gap of 10 11 11783: contig of 1 11783: gap of 1 10 12582: contig of 6 13 12682: gap of 1 13 12682: gap of 1 10 13 12682: g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 1564: 94;
2268: 7ap
                                                                                                                                                                                                                        9 18278: gap of 10
9 18962: contig of 6
3 19662: gap of 10
3 19673: contig of 6
4 19773: gap of 10
4 20436: contig of 6
                                                                                                                                                                                                                                                                                                                                                                                                                      7 15096; gaj
7 15796;
                                                                            22908: ga
23595:
23695: ga
                                                                                                                                                                         7 20536: ga
7 21233:
1 21333: ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0032: contig of
8732: gap of 10
9430: contin 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9530:
                           24491: gap of 
25190: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10314: gap of
10980: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7937:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          763:
                                                                                                                                             22142:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7140:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6334:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5523:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4726:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3920:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3142:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2368: gap
                                                                                                                                                                                                                                                                                                                                                                             1
20: contig of 7
20: 3496: gap of
16583: ~
683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3: gap of 6234: cr. 4: r.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7040: contig c
                                                                                                        22042: contig of 709 l
142: gap of 100 bp
22808: contig of 666 k
908: gap of 100 bp
                                                                                                                                                  22042:
                                                        24391: ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9430: contig of
30: gap of 10
10214: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : gap of
1464: cc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7837:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4626:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3820:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3042:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7040: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap
               gap
                                                                                                                                                                                                         gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig
                                                                                                                                                                                        contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contig of of
                                                                                            contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      contig
                              of.
                                                               of
                                                                                             of
                                                                                                                                                                                           of 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        o.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         o
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 663 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                   100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70.
100 bp
<97 bp f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 bp
                                                           100 bp
of 687 bp in
100 bp
of 696 bp in
                                                                                                                                                         100 bp
of 697 bp
100 bp
1709 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 bp
of 711 bp
                             100 bp
f 699 bp
                                                                                                                            100 bp
f 666 bp
                                                                                                                                                                                                                                                       100 bp
                                                                                                                                                                                                                                                                                                                        100 bp
f 702 bp in
                                                                                                                                                                                                                                                                                                                                                                                         100 bp
f 687 bp
                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
f 700 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100 bp
f 704 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
£ 710 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  707 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               √ bp
+ 697 '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 br
f 706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
f 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , 697
                                                                                                                                                                                                                        100 bp
[ 663 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             706 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .00 bp
.695 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  701 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      678 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       đđ
                                                                                                                                                                                                                                                                                        bp
4 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ni dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                                                                                                                                           in
                                                                                                                                                                                          in
                                                                                                                                                                                                                                                                                                                                                                                       in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      in length
ij
                              'n
                                                                                                                            İ'n
                                                                                                                                                                                                                                                         in
                                                                                                                                                                                                                                                                                                                                                          in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
length
                             length
                                                                                                                            length
                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                            length
```

25982 26081: gap 26082 26765: (31566 31665: 26766 26865: 33952 34051: 30776 30875: 27564 2766 499/>.
3 50884; cu...
35 50784; gap of 51507; contig o 10 91 48390: gap of 10 11 49077: contig of 68 8 49177: gap of 100 1 49879: contic 1 43600: gap 1 44295: 3 38772: 53233: gap of 1 53933: contig of 54033: gap of 1 33257 54033: gap 54703: c 51607: gap 52320: c 44395: 42779: 41991: 41187: 46783: 45980: 45188: 40390: 34835: 32460: 29284: 38672: Capped of 70 72: gap of 70 39475: contig of 70 40290: contig of 7 44295: contig of 695 b 4395: gap of 100 bp 45088: contig of 693 b 5188: gap of 100 bp 45880: contig of 692 b 5980: gap of 100 bp 46883: contig of 703 b 42679: contig of (2779: gap of 10 43500: contig of 7 3600: gap of 10 34735: contig of (4835: gap of 10 35483: contig of 6 5583: gap of 10 36308: contig of 7 1 .ul: contig of 6 /581: gap of 48290: rr cont 2679: ~ con J: gap of 31565: 41087: co 34735; cc. 29184: co 450: gap of 33157: cont 27563: 28377. 20: gap of 100 l 53133: contig of 713 32360: co 33951 30775: 84: gap of 29983: contig of 11891 gap of gap of gap of 100 bp contig of 680 h contig of p or 100 t contig of 714 contig of contig of contig of contig contig of contig of contig of contig of contig of of of of. of 694 0f 100 bp 100 l 100 l f 705 100 bp f 703 bj 100 bp f 704 b 100 bp f 700 bj 100 bp 100 bp 100 bp 100 bp 100 bp 100 bp dq 00T 100 bp 100 bp 100 bp 100 bp 100 bp 697 687 709 869 721 688 697 715 703 648 684 695 690 692 699 707 869 dq qq ďď ďď bp in þþ đđ dq bp in þþ đđ bp in ďď þ g bp in bp in đđ gg dq ďď đđ bp in đď in in in 'n in ij in in 'n in in length in in in Ħ in in length Ħ in in ij ä in in in in length in length in 'n length
```
REFERENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1
AC015840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 112485 TCAGAATATGAGTCCACAGAACTTTCAGCCACCTTTTCAACTCAAACCCCTTGCAA 112426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db 112545 ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 112486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 atggattcaagcaccgcacaagtccggtgtttctggtatttcctccagaaatcactgct 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Baldwin, J., Barna, N., Beckerly, R., Boguslavkiy, L., Boukhgalter, B., Brown, A., Castle, A., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Domino, M., Donelan, L., Doyle, M., Ferreira, P., FitzHugh, W., Forrest, C., Funke, R., Gage, D., Galgan, J., Gardyna, S., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., Lehoczky, J., Lieu, C., Locke, K., Macdonald, P., Marquis, N., McEwan, P., McGurk, A., McKernan, K., McLaughlin, J., Maddrim, J., Morrow, J., Naylor, J., Narman, C.H., O'Connor, T., O'Donnell, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Tirrell, A., Vassiliev, H., Vo, A., Wheeler, J., Wu, X., Wyman, D., Ye, W. J., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission

Submitted (17-NOV-1999) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Apr 27, 2000 this sequence version replaced g1:6446828. All repeats were identified using RepeatMasker:

Smit, A.F.A. & Green, P. (1996-1997)

http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 (bases 1 to 147788)
Birren, B., Linton, L., Nusbaum, C., Lander, E., Allen, N., Anderson, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 147788)
Birren, B., Linton, L., 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HTG; HTGS_PHASE1; HTGS_DRAFT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BITTEN,B., Linton,L., Nusbaum,C. and Lander,E. Homo sapiens, clone RP11-24D1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC015840.2 GI:7657730
Insert size: 203000; agarose-fp
Insert size: 147388; sum-of-contigs
Ouality coverage: 5.2 in Q20 bases;
                                                                     Assembly program: phrap; version 0.960731
Consensus quality: 136347 bases at least Q40
Consensus quality: 143600 bases at least Q20
Consensus quality: 146212 bases at least Q20
                                                                                                                                                         Sequencing vector: M13; M77815; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads
                                                                                                                                                                                                                                                                      Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                   Center clone name: 24_D.
                                                                                                                                                                                                                                                        Center project name: L4434
                                                                                                                                                                                                                                                                                                                       Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                              Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                   Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   147788 bp um. - ~lone RP11-24D1, F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34.18;
96.38;
                                                                                                                                                                                                                                                                                                                                                                                            -- Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 153.4;
Pred. No. 2.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
  Q20 bases; agarose-fp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HTG 27-APR-2000 WORKING DRAFT SEQUENCE, 5 unordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .8e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 138097;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
  REFERENCE
                                                                                          SOURCE
                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                              AP003127/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                               KEYWORDS
                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             al Similarity
157; Conserv
                                                                 Homo sapiens
                                                                                                                                    AP003127.1 GI:12597183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Quality coverage: 7.1 in Q20 bases; sum-of-contigs
                                                                                     HTGS_PHASE1; HTGS_DRAFT. sapiens DNA, clone:RP11-710G6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64024. .147788
/note="assembly_fragment"
a 29482 c 28861 g 43569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25190.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vector_side:right"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone_end:SP6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16288.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6695.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone_end:T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="RP11-24D1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .147788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .16187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .25089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .63923
```

```
aaattatttgctagaaaaatgaaaatcttagggactatccaga 163
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 161039)
                                                                                                                                                                              AP003127 161039 bp DNA HTG
Homo sapiens chromosome 11 clone RP11-710G6
SEQUENCE, 15 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NOTE: This is a 'working draft' sequence. It currently consists of 5 contigs. The true order of the pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 6594: contig of 6594 bp in length
6595 6694; gap of 100 bp
6695 16187: contig of 9493 bp in length
16188 16287: gap of 100 bp
16288 25089: contig of 8802 bp in length
25090 25189: gap of 100 bp
25190 63923: contig of 38734 bp in length
63924 64033: gap of 100 bp
64024 147788: contig of 83765 bp in length
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="RPCI-11 Human Male BAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 153.4; DB 2;
Pred. No. 2.8e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 147788;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                         map 11q,
                                                                                                                                                                                                           30-JAN-2001
.q, WORKING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128106
                                                                                                                                                                                                           DRAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@ysc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (26-JAN-2001) Masahira Hattori, The Institute of Physical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Tottoki,Y., Watanabe,H. and Sakaki,Y. Homo sapiens 161,039 genomic DNA of 11g Published Only in DataBase (2001) In press
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOTE: This is a 'working draft' sequence. 15 contigs. The true order of the pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                as soon as it is available and the accession number will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 preserved
                                                                                                                                                                                                                                                NOTE: This is a 'working draft' sequence. It currently consists of 15 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                               as soon as it is available be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 161039)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chemistry: Dye-terminator ET-amersham; 100% of reads Assembly program: Phrap; version 0.990329 Consensus quality: 157456 bases at least Q40 Consensus quality: 158960 bases at least Q30 Consensus quality: 159457 bases at least Q20 Insert size: 159639; sum-of-contigs Quality coverage: 8.61x in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                             149023
154260
157787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site: http://ngp.ysc.....
Contact: hattori@gsc.riken.go.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center code: RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center: RIKEN Genomic Sciences Center(GSC)
                                                                                                                                                                                                                                                                                                                                                          159335
                                                                                  42322 contig of 42322 bp in length
42323 42422: gap of 100 bp
42423 63418; contig of 2096 bp in length
63419 63518; gap of 100 bp
63519 77969; contig of 14451 bp in length
77970 78069; gap of 100 bp
778070 93182; contig of 15113 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .15803
                                   104193: gap of
                                            93282: gap of 100 bp 104093: contig of 10811 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---- Project Information
                                                                                                                                                                                                                                                                                                                                                       137219 contig of
143276 contig of
148922 contig of
154159 contig of
157686 contig of
159234 contig of
161039 contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://hgp.gsc.riken.go.jp/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115702
125183
                  15702:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42322
63418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genome Center
                                                                                                                                                                                                                                                                                                                                      a 'working
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig
              contig of 11509 l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig
                                                                                                                                                                                                                                                                                                                                           draft' sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of
                                                                                                                                                                                                                                 and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42322
20996
14451
                bp in length
                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        It currently
                                                                                                                                                                                                                                                                                                                                                          length
length.
                                                                                                                                                                                                                                                                                                                                                                                                           length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                              length
length
                                                                                                                                                                                                                                                                                                                                      It currently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
length
                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hong-Seog, P.,
and Sakaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        consists of
                                 ΩV
                                                                                                        γ
                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
Db 149498
                                                                      Db 149558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_teature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_teature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                        61
                                                                                                                                                                                                                  157;
```

```
Db 149618 ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 149559
             121 aaattatttgctagaaaaatgaaaatcttagggactatccaga 163
                                                                                                                           1 atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 60
                                                                     tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCTTGCAA 149499
                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                      49155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         159235 159334: gap of
159335 161039: contin of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143277 143376:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           137220 137319: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     132559 132658:
                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25184 125283:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="assembly_fragment"
63519. .77969
                                                                                                                                                                                                                                                    /note="assembly_fragment"
31166 c 31523 g 47795 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78070
                                                                                                                                                                                                                                                                                                           /note="assembly_fragment"
157787. .159234
                                                                                                                                                                                                                                                                                                                                                                 149023
                                                                                                                                                                                                                                                                                                                                                                                                                         /note="assembly_fragment clone_end:SP6 vector_side:left"
137320. .143276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="assembly_fragment"
115803. .125183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104194. .115702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="11"
                                                                                                                                                                                                                                                                                /note="assembly_fragment"
159335, .161039
                                                                                                                                                                                                                                                                                                                                    154260. .157686
                                                                                                                                                                                                                                                                                                                                                                           143377. .148922
/note="assembly_fragment clone_end:T7 vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                       note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                   .32659. .13721
                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="assembl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone="RP11-710G6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143376: gap of 100 bp
148922: contig of 5546 bp
149022: gap of 100 bp
154159: contig of 5137 bp
154259: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     132558:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143276: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125183: contig
                                                                                                                                                                                 34.1%;
96.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         137219: contig of 4561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .104093
                                                                                                                                                                                                                                                                                                                                                                   .154159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .93182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .132558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig of 3427
                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of
                                                                                                                                                                   Score 153.4; DB 2;
Pred. No. 2.8e-24;
0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             y_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 bp
= 7275 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       142,
100 bp
148 bp j
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
4561 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                                                                                                                                                                                                                                    1400 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                             Length 161039;
                                                                                                                                                                    Indels
                                                                                                                                                                    0;
                                                                                                                                                                   Gaps
```

0;

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
AP001034/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                            NOTE: This is a 'working draft' sequence. It currently consists of 19 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (06-JAN-2000) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170) on Nov 14, 2000 this sequence version replaced gi:8117704.
                                                                                                                                                                                                                                                                                     preserved
                                                                                                                                                                                                                                                                                                    as soon as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 166804)
Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P.,
Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
Homo sapiens 166,804 genomic DNA of 11q12
Published Only in DataBase (2000) In press
2 (bases 1 to 166804)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AP001034 166804 bp DNA
Homo sapiens chromosome 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AP001034.4 GI:11176992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DRAFT SEQUENCE, 19 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                  Consensus quality: 162254 bases at least Q40 Consensus quality: 163858 bases at least Q30 Consensus quality: 164544 bases at least Q20 Consensus quality: 164544 bases at least Q20 Insert size: 165004; sum-of-contigs Quality coverage: 9.28x in Q20 bases; sum-of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequencing vector: PCR products; 100% of reads Chemistry: Dye terminator ET-amersham; 100% of Assembly program: Phrap; version 0.990329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Web site: http://hgp.gsc.riken.go.jp/
Contact: hattori@gsc.riken.go.jp
Project Information
                   159605
159780
162519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center clone name: RP11-729B4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center project name: HumDraftll
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center code: RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Center: RIKEN Genomic Sciences Center(GSC)
                                                                                          149455
                                                                                                                                                                                                             45339
64379
77680
                                                                                                                                                                                                                                                        22499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens DNA, clone:RP11-729B4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HTGS_PHASE1; HTGS_DRAFT
                                                                                                                                                                                               93819
                                                                                                                                                                                                                                                                                                   it is available and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           166804 bp

    Genome Center

                                                                                                         149354
                                                                                                                                      140425
                                                                                                                                                                                              108057
                                                              159504
                                                                                                                                                                                                                         22398
45238
64278
77579
                                                                                                                                                                  .26302
                                                          contig
contig
contig
                                            contig
                                                                                                      contig
                                                                                                                                                 contig
                                                                                                                                                                              contig
                                                                                                                       conti
                                                                                                                                   conti
                                                                                                                                                                contig
                                                                                                                                                                                              contig
                                                                                                                                                                                                           contig
                                                                                                                                                                                                                           contig
                                                                                                                                                                                                                                          contig
                                                                                                                    5
                                                                                                                                   5
   0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A HTG 14-NOV-2000 clone RP11-729B4 map 11q12, WORKING
                                                                                                     000000000000
                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                         18940
13201
                                                                                                                                                                                              14239
                                               7077
6846
4128
4601
5068
1297
3485
                                                                                                                                                               8849
9196
                                                                                                                                                                                                             16039
                                                                                                                                                                                                                                                                                                               updated with the finished sequence
                                                                                                                                                                                                                                                                                                   accession number
                                                                                                                                                                                                                                                                                                                                                                                                  bases; sum-of-contigs
 in
                                                                                                                 length
length
                                                                        length
length
                                                                                                                                                length
                                                                                                                                                                           length
length
                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                     length
   length
                                                                                                     length
                                                                                                                                                                length
                                                                                                                                                                                                                         length
                  ength
                                .ength
                                            length
                                                             length
                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reads
                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
   misc_feature
                                                          misc_feature
                                                                                     misc_feature
                                                                                                                  misc_feature
                                                                                                                                              misc_feature
                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 22398: contig of 22398 bp in length
22399 22498: gap of 100 bp
22499 45238: contig of 22740 bp in length
45239 45238: gap of 100 bp
45339 64278: contig of 18940 bp in length
64279 64378: gap of 100 bp
64379 77579: contig of 13201 bp in length
77580 77679: gap of 100 bp
77680 93718: contig of 16039 bp in length
93819: gap of 100 bp
108057: contig of 16039 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          be preserved
                                                                                                                                                                                                                                                                                                                                                                                                                            154623 155919
155920 156019:
155920 159504
159505 159604:
159505 159679
159680 159779:
159680 159779:
159680 159780 162418:
162419 165383:
162519 165383:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            154523 154622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         149355 149454:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    144654 144753:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .33480 133579: gap of 
.33580 140425: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               108058 108157: gap of 100 k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40426 140525:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26303 126402:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17007 117106:
/note="assembly_fragment"
140526. .144653
                                                       /note="assembl
126403. .13347
                                                                                                                                              /note="assembly_fragment"
93819. .108057
                             /note="assembly_fragment"
133580. .140425
                                                                                     /note="assemb
117107. .1263
                                                                                                                  108158
                                                                                                                             /note="assembly_fragment"
                                                                                                                                                                             77680.
                                                                                                                                                                                       /note="assembly_fragment"
                                                                                                                                                                                                          64379.
                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:9606"
/chromosome="11"
                                                                                                                                                                                                                      /note="assembly_fragment"
                                                                                                                                                                                                                                                  /note="assembly_fragment"
                                                                                                                                                                                                                                                                             /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                            clone="RP11-729B4"
                                                                                                                                                                                                                                                                                                 . 22398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unt.
32: gap of
149354: ~~
9454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40525: gap of 144653: conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2: gap of 133479: cc 3570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             154522:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      154522: contig of 5068
4622: gap of 100 k
155919: contig of 1297
                                                                                                                                                                                                                                                                                                                                                                                                                                           2018: gap of 165383: cont
                                                                                                                                                                                                                                                                                                                                                                                                                   166804: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  )779: gap of 100 b
162418: contig of 2639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       159679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59504:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26302:
                                                                                                                                                                             .93718
                                                                                                                                                                                                          .77579
                                                                                                                                                                                                                                                                    .45238
                                                                                                                                                                                                                                       .64278
                                                                                                                    .117006
                                                           .133479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap ot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig of 7077 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig of 4601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ontig of 4128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     contig of 9196
                                                                                                                                                                                                                                                                                                                                                                                                                 contig of 1321
                                                                                                                                                                                                                                                                                                                                                                                                                                             contig of 2865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig of 75 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contig of 3485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig
                                                                                                  _y_fragment"
                                                                      y_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 bp
                                                                                                                                                                                                                                                                                                                                                                                                         100 bp /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .00 bp
```

g

in length

bp in length bp in length bp in length bp in length bp in length bp in length bp in length bp in length bp in length

bp in length

in length

in length

đđ

```
arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                       NOTE: This is a 'working draft' sequence. It currently consists of 19 contigs. The true order of the pieces is not known and their order in this sequence record is
as soon as it is available and the accession number will
```

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
AC090401/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Focus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 157;
                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 60
                                 Birren, B., Linton, L., Nusbaum, C., Lander, E., Allen, N., Anderson, S., Barran, N., Bastien, V., Boguslavkiy, L., Boukhgalter, B., Brown, A., Campopiano, A., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Dlaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Heaford, A., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Karatas, A., Larocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Liu, G., MacLean, C., MacGonald, P., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Mienga, V., McPheeters, R., Meldrim, J., Meneus, L., Mihova, T., Mienga, V., Poltor, J., Nguyen, C., Norbu, C., Norman, C.H., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Phunkhang, P., Pierre, N., Fise, C., Rogov, P., Roman, J., Rosetti, M., Royla, R., Schupback, R., Seaman, S., Severy, P., Sougnes, C., Spencer, B., Stanger-Thomann, N., Statany G., Nevery, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTCAACTCAAAGCCCCCTTGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 11696
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Birren, B., Linton, L., Nusbaum, C. and Lander, E. Homo sapiens chromosome 11, clone RP11-729B4
                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens chromosome 11 clone SEQUENCE, 2 ordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC090401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 166820)
                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 166820)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="assembly_fragment" 165484. .166804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162519.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="assembly_fragment clone_end:T7 vector_side:left"
159780...162418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="assembly_fragment"
159605, .159679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="assembly_fragment clone_end:SP6 vector_side:right"
156020. .159504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      154623.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="assembly_fragment" 144754. .149354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="assembly_fragment"
162519. .165383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 149455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assemb]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="assemb]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31523 c 32296 g 50478 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Metazoa; Chordata; Craniata; Vertebrata; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            166820 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:14971278
                       Spencer, B., Stange-Thomann, N., Stojanovic,
    Subramanian, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       34.1%;
96.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .155919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .154522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 153.4; DB 2
Pred. No. 2.8e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     y_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RP11-729B4 map 11, WORKING DRAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1801 others
Tesfaye,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 166804;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                          Anderson, S.,
                                        Severy, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
```

밁

Š

В δÃ

δÃ

밁

```
ğ
       20
                                                                                                                                            Db 144040
                                                                                                                                                                                                                                                                                                                                                                                                                Db 144100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             157;
aaattatttgctagaaaaatgaaaatcttagggactatccaga 163
                                                                                                                                     tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                                                                                                                                                                                                                                                                                                                                                                         ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 144041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (17-FEB-2001) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Jul 20, 2001 this sequence version replaced gi:12958037. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Travers, M., Travis, N., Trigilio, J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Zainoun, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zembek, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Summary Statistics
Sequencing vector: Plasmid; n/a; 100% of reads
Sequencing vector: Plasmid; Dye; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Assembly program: Phrap; version 0.960731
Consensus quality: 166378 bases at least 040
Consensus quality: 166639 bases at least 030
Consensus quality: 166692 bases at least 020
Insert size: 176000; agarose fp
Ouality coverage: 12.2 in 020 bases; agarose-fp
Quality coverage: 12.9 in 020 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the accession number will be preserved.

1 1095: contig of 1095 bp in length
1096 1195: gap of 100 bp
1196 166820: contig of 165625 bp in leng.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               consists of 2 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of the gaps between them are based on estimates that have provided by the submittor % \left( 1\right) =\left\{ 1\right\}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOTE: This is a 'working
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  by the finished sequence as soon as it is available and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence will be replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      is believed to be correct as given, however the sizes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center project name: L12709
Center clone name: 729_B_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Center: Whitehead Institute/ MIT Center for Genome Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vector_side:right"
1 31826.c 32895 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone_end:T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="assembly_fragment"
1196. .166820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1196. .166820
/note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="RP11-729B4"
/clone_lib="RPCI-11 Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .166820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zimmer, A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34.1%;
96.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 153.4; DB 2 Pred. No. 2.8e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    draft' sequence. It currently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55563 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Male
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 166820;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT 1
AP003127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
EFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hon Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Homo sapiens 161,039 genomic DNA of 11g published only in DataBase (2001) In press 2 (bases 1 to 161039)
Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hon Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (26-JAN-2001) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
                                                                   149023 15415
154260 15768
157787 15923
159335 16103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   as soon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NOTE: This is a 'working draft' 15 contigs. The true order of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AP003127.1 GI:12597183
                                   consists of 15 contigs.
       SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 161039)
                                                                                                                                                                                                                                           132659
137320
143377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequencing vector: PCR products; 100% of reads Sequencing vector: PCR products; 100% of reads Chemistry: Dye-terminator ET-amersham; 100% of reads Assembly program: Phrap; version 0.990329
Consensus quality: 157456 bases at least Q40 Consensus quality: 158960 bases at least Q30 Consensus quality: 159457 bases at least Q20 Insert size: 159639; sum-of-contigs quality coverage: 8.61x in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center: RIKEN Genor
       not known
                                                                                                                                                                                                                                                                                                                                                                                          11580:
                                                                                                                                                                                                                                                                                                                                                                                                                              10419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42423
63519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HTGS_PHASE1; HTGS_DRAFT.
sapiens DNA, clone:RP11-710G6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens chromosome 11 clo
ENCE, 15 unordered pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161039 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RIKEN Genomic Sciences Center(GSC)
                                                                                            77969 contig of 93182 contig of 104098 contig of 115702 contig of 125183 contig of 132558 contig of 137219 contig of 143276 contig of 148922 contig of 159184 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               is available and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genome Center
                                                                'working
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
                                       The true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A HTG
clone RP11-710G6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
       in this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                           11509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42322
20996
                                                                                                                                                                                                                                                                               7275
4561
5957
                                                                                                                                                                                                               5546
5137
                                                                                                                                                                                                                                                                                                                                                                                                                                                           10811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               accession
                                                                                                       $\frac{1}{2} \text{$\frac{1}{2} \text{$\frac{1} \text{$\frac{1} \text{$\frac{1} \text{$\frac{1} \text{$\frac{1} \text{$\frac{1}
                                   ce. It c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                It currently consists
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
length
                                                                                                                                                                                                                                                                                                               length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JAN-2001 map 11q, WORKING DRAFT
                                                                                                       length
                                                                                                                                           length
                                                                                                                                                                                                           length
                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                           length
                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               number will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hong-Seog, P., and Sakaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hong-Seog, P.,
and Sakaki, Y.
                                                                   currently
record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of.
                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                misc_feature
                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_teature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
                                   49155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               be preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149023 154159; cont.
154160 154259; gap of
154260 157686; cont.
157687 157786; gap of
157787 159234; cont.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 l
9381
125184 125283: gap of 100 b
105284 132558: contin of 777
32559 13777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159235 159334: gap of 159335 161039: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143277 143376: gap of
143377 148922: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             137220 137319: gap of
137320 143276: conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15703 115802:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      104094 104193: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03519 77969: contig of 14451 bp in 77970 78069: gap of 100 ho 78070 93182.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 42322: contig of 42322 bp in length
42323 42422: gap of 100 bp
42423 63418: contig of 20996 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32559 132658:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78070 931
93183 93282:
                                                                                                /note="assembly_
157787...159234
/note="assembly_
159335...161039
                                                                                                                                                                                                                                                                                                                                                                                                         /note="assembly_fragment
137320. .143276
_note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="assembly_fragment"
132659. .137219
                                                                                                                                                                                                                                               154260. .157686
                                                                                                                                                                                                                                                                                                               149023.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115803. .125183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                104194. .11570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_fragment"
78070. .93182
                                                                                                                                                                                                                                                                    note="assemble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                     'note="assembly_fragment clone_end:T7 vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="RP11-710G6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25284. .13255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Joseph St. Contig c
J37219: cr.
37319:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
1115802: gap of 11509 b
115802: gap of 100' 125183: cont'
2500'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             y gap of 100 bp 100 bp 100 bp 100 bp 100 bp 100 bp 1000 bp 1000 bp 1000 bp 1000 bp 1000 app 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .9022: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                       . .148922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .104093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .63418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contig of 5957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of
                                                                                                                                .y_fragment"
                                                                                                                                                                                                    ly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                y_fragment clone_end:SP6 vector_side:left*
                                                            _fragment"
                            9
                                   47795 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dq 001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dq 001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  00 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                   1400 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in length
```

length

length

length

length

length

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
Search completed: November 28, 2001, 23:48:11 Job time: 8134 sec
                                                               망
                                                                                     οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                179783
CUS
                                                                                                                                                                   Query Match 25.1%; Score 113; DB 6; Length 246; Best Local Similarity 100.0%; Pred. No. 2e-15; Matches 113; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 29.4%; Score 132.4; DB 2; Best Local Similarity 95.8%; Pred. No. 1.2e-19; Matches 136; Conservative 0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                          Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

1 (bases 1 to 246)
Walke, D.W. and Turner, C.A.
Human membrane proteins and polynucleotides encoding the same having homology to cd20 proteins and ige receptors
Patent: WO 0146417-A 3 28-JUN-2001;
Lexicon Genetics Incorporated (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3 from Patent WO0146417.
AX179783
AX179783.1 GI:15132145
                                                                                                                                                                                                                                                                                                                                                                                                                                   human.
                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
45 c 47 g 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 246 bp
                                                                                                                                                                                                                                                  94 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 161039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
                                                                                                                                                                   0;
                                                                                                                                                                   Gaps
                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

THIS PAGE BLANK (USPTO)

٤

Run

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on:
                                                                                                                                                                                                                                                           score greater than and is derived by a
                                                                                                                                                                                                                                                                                          Pred. No.
                                450
347.4
347.4
347.4
340.8
340.8
280.8
234
113
                                                                                                                                                                                   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length: 0
length: 2000000000
                                                                                                                                                                                   Query
Match
                                                                                                                                                                                                                                                          is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.
    100.0
77.2
77.2
77.2
75.7
62.4
52.0
25.1
17.6
16.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N_Geneseq_1101:*
1: /SIDS2/gcgdata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-735-712-7
450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     930621 segs, 428662619 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   November 28, 2001, 23:12:03; Search time 204.6 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                  /SIDS2/gcgdata/geneseq/geneseqn/NA1990.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1991.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1992.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1993.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1994.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1995.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1995.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1997.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1999.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1999.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1999.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1990.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             atggattcaagcaccgcaca.....attgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /SIDS2/gcgdata/geneseq/geneseqn/NA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1982.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1984.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS2/gcgdata/geneseq/geneseqn/NA1988.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1989.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS2/gcgdata/geneseq/geneseqn/NA1985.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn/NA1987.DAT:*
                                                                                                                                                                                     Length
    246
1563
936
936
                                                                                                                                                                                     ₽B
                                                                                                                                                                                     IJ
   AAS04282
AAS04279
AAS04283
AAH64741
AAS04281
AAC03080
AAC03080
AAAC36238
AAF58252
AAF58252
                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (without alignments)
1885.613 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1861242
Novel human membra
Novel human membra
DNA sequence encod
Human secreted pro
Novel human membra
Human secreted pro
Human secreted pro
Human secreted pro
Human secreted pro
Oligonucleotide D1
Oligonucleotide D1
                                                                                                                                                                                   Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAS04282
ID AAS0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                Walke DW,
                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                         AAS04282;
                                                                                                                                                                                                WO200146417-A2
                                                                                                        22-DEC-1999;
                                                                                                                                                                    28-JUN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                             26-SEP-2001
                                                                                                                                                                                                                                                                                                       sapiens.
```

Human CD20 antigen	AAV81209	20	1476	•	40.4	Ü
Human CD20 antigen	AAV63451	19	1476	•	40.4	4
Human CD20 antigen	AAT14713	17	1476	•	0	Ü
_	AAQ21173	13	1476	•	0.	N
	AAN90613	10	1476	•	40.4	Ë
Human lymphocyte c	AAS03178	22	1474	9.0	0	Ö
Human cell surface	AAA50584	21	1474	•	40.4	ö
D20		17	1474		0.	8
DNA.	AAN90610	10	1473	9.0	0.	7
Extended human sec	AAX97730	20	1060	-	0	6
Clone CD20.4 encod	AAQ21170	IJ	1474		42	G
Plasmodium falcipa	AAA70114	21	6888	•	43	4
Oligonucleotide D1	AAF58238	22	244	•	43.6	ü
Human FceRI beta g	AAQ51021	14	2545	•	٠.	Ñ
Encodes beta subun	AAQ14734	12	2545		4	二
Encodes beta subun	AAQ04645	11	2545	•	44.4	õ
onucleot	AAF58238	22	244	•	4.	ĕ
	AAV03875	19	1661	•	46	ä
ש	AAT45120	17	1661	•		?7
Human secreted exp	AAA45410	21	220	•	8	õ
Murine wild-type F	AAF77694	22	708	•	0	Ğ
high aff	AAZ32842	21	1670	•	<u>ه</u>	4
High affinity immu	AAX15104	20	1669	14.8	66.8	ຜ
~	AAA16693	21	1330	•	6.	iŏ
	AAF58255	22	938	•	_	ï
	AAF58262	22	936	•	_	õ
	AAF58259	22	936	•	-	ڡ۬
	AAF58257	22	936	•	71.4	80
Oligonucleotide D1	AAF58254	22	936	•	۲.	7
O	AAF58252	22	936	•	۲.	Ġ
	82	22	938	16.4	ω	'n
0	5826	22	936	16.4	ω	4
Oligonucleotide D2	AAF58259	22	936	16.4	73.6	w
Oligonucleotide D1	82	22	936	16.4	w.	io

ALIGNMENTS

```
WPI; 2001-408646/43.
P-PSDB; AAU01213.
                                                                                                                                                                                                                                           AAS04282 standard; cDNA; 450
                                                                    12-DEC-2000; 2000WO-US33742
                                                                                                                                                                      Human; membrane protein; membrane receptor; IgE receptor; CD20; physiological disorder; ss.
                                                                                                                                                                                            Novel human membrane protein #4 cDNA sequence
                                      (LEXI-) LEXICON GENETICS INC
                      Turner CA;
                                                                                                                                                                                                            (first entry)
                                                     99US-0171567
                                                                                                                                 \Location/Qualifiers
1..450
                                                                                                                 /*tag= a
/product= "Human membrane protein
                                                                                                                          /*tag=
                                                                                                                                                                                                                                           ВP
                                                                                                                  #4"
```

Result No.

```
RESULT

AAS04279

ID AAS0

XX

AC AAS0

DT 26-S

XX

DE Nove

XX

Huma
                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                         밁
                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                  ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence encodes for novel human membrane protein #4. Human membrane protein # 4 is 1 of 4 human membrane proteins (AMU01210-AMU01213) given in the present invention. These membrane proteins stare structural similarity with membrane receptors such as the IgE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonists antagonists and modulators of the membrane proteins, and for producing antibodies specific to the membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The polynucleotides encoding the membrane proteins can be used to generate PCR primers or probes to identify mutations associated with a particular alternations.
  Human;
                            Novel human
                                                                                                        AAS04279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                     26-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polynucleotide encoding novel human membrane identifying agonist, antagonist or modifiers antibodies useful in therapeutic, diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    applications
                                                                                                                                                                         421
                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \vdash
                                                                                                                                N
                                                                                                                                                                                                                    gaggattgtgattgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                    ttcctaattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                                    tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                      gaggattgtgattgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                                                                          accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                      accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                                                          atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                       ttcctaattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                        tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                atggattcaagcaccgcacagtccggtgtttctggtatttcctccagaaatcactgct
  membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    450
                                                                                                       standard; cDNA;
                          membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP; 120
 protein; membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31;
                                                    entry)
                          protein #1 cDNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 450; DB 22;
Pred. No. 1.3e-110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>ი</u>
 receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 т;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
IgE receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein, useful
or for producing
and pharmacogeno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pharmacogenomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
В
                             δÃ
                                                          밁
                                                                               QY
                                                                                                             밁
                                                                                                                                     Qy
                                                                                                                                                                  В
                                                                                                                                                                                         Š
                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                          Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                        The present sequence encodes for novel human membrane protein #1. Human membrane protein #1 is 1 of 4 human membrane proteins (AAU01210-AAU01213) given in the present invention. These membrane proteins share structural similarity with membrane receptors such as the IgE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonists, antagonists and modulators of the membrane proteins, and for producing antibodies specific to the 10 membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The polynucleotides encoding the membrane proteins can be used to generate PCR primers or probes to identify mutations associated with a particular disease.
                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polynucleotide encoding novel human membrane protein, useful for identifying agonist, antagonist or modifiers or for producing antibodies useful in therapeutic, diagnostic and pharmacogenomic applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Walke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Нолю
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       physiological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200146417-A2
     241
                               241
                                                          181
                                                                                 181
                                                                                                             121
                                                                                                                                         121
                                                                                                                                                                  61
                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                              _
                                                                                                                                                                                                                                                                                                   Match
atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                   accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                        aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatt
                                                                                                                                                                            tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                  atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                       accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                          aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                                                                                                                                               tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-408646/43.
DB; AAU01210.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                          354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DW,
                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                          603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Turner CA;
                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                          BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US33742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0171567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= a
/product= "Human membrane protein #1"
/product= "(pos:595..600,aa:Cys)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1..603
                                                                                                                                                                                                                                                                                                                                          162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32pp; English.
                                                                                                                                                                                                                                                                                     77.2%;
97.0%;
                                                                                                                                                                                                                                                                                                                                          Α.
                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SS
                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                       Score 347.4; DB 2
Pred. No. 2.8e-83;
0; Mismatches 11
                                                                                                                                                                                                                                                                                                                                          104
                                                                                                                                                                                                                                                                                                                                        <u>ن</u>
                                                                                                                                                                                                                                                                                                                                        212
                                                                                                                                                                                                                                                                                                                                        ₽;
                                                                                                                                                                                                                                                                        11;
                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                 22;
                                                                                                                                                                                                                                                                                                                                          other;
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                 603;
                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                       Gaps
```

180 120 120 60 60

0

300

240 240 180

c

```
RESULT

AASO4283
ID AASC
XX
AC AASC
XX
DT 26-5
XX
DE DNA
XX
DE DNA
XX
Hume
                         QY
                                                             Вb
                                                                                       δÃ
                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γ
                                                                                                                     Query Match 77.2%;
Best Local Similarity 97.0%;
Matches 354; Conservative
                                                                                                                                                                                                                             antibodies specific to the membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The polynucleotides encoding the membrane proteins can be used to generate PCR primers or probes to identify mutations associated with a particular disease.
                                                                                                                                                                                                                                                                                                                       The present sequence encoding for a novel human membrane protein includes the flanking 5'- and 3'- sequences. Four amino acid sequences for novel human membrane proteins (AAU01210-AAU01213) are given in the present invention. These membrane proteins share structural similarity with membrane receptors such as the IgE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonist, antagonist and modulators of the membrane proteins, and for producing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA sequence
                                                                                                                                                                                                 Sequence 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 31-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  applications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Polynucleotide encoding novel human membrane protein, useful for identifying agonist, antagonist or modifiers or for producing antibodies useful in therapeutic, diagnostic and pharmacogenomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-DEC-2000; 2000WO-US33742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; membrane protein; membrane receptor;
physiological disorder; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAS04283;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAS04283 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-408646/43.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Walke DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200146417-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
 93
                              61
                                                             33
                                                                                          \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
              tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                          atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 92
                                                                        atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                acttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ttcctaattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattgatg
tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aatct 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ttcctaattgcagtgaaaagaaaaaccacagaaactctgataatattgagccgaataatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Turner CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          encoding novel human
                                                                                                                                                                                                 BP; 193 A; 140 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0171567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   32pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΒP
                                                                                                                     Score 347.4;
Pred. No. 2.9e
0; Mismatches
                                                                                                                       0;
                                                                                                                                                                                                 112 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          membrane protein
                                                                                                                                                                                                 231 T; 0 other;
                                                                                                                                     .9e-83;
                                                                                                                                                    DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IgE receptor; CD20;
                                                                                                                       11;
                                                                                                                       Indels
                                                                                                                                                  Length
                                                                                                                                                  676;
                                                                                                                       0;
                                                                                                                       Gaps
                                                                                        60
 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                       0,
```

```
RESULT
AAH64741
ID AAH6
         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
diseases associated with inappropriate GENSET gene expression. For example, they be used to treat disorders associated with decreased GENSET gene expression by rectifying mutations or deletions in a patient's genome that affect the activity of GENSET or by supplementing the patients own production of GENSET polypeptides. Conversely, antisense nucleic acid molecules may be administered to down regulate GENSET expression. The sense and antisense nucleic acids may also be used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acid sequences in samples, and hence to determine which patients may be in need of restorative therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; s
GENSET;
                                                                                                                                                                 The invention relates to full length GENSET human nucleic acids encod potentially secreted proteins. The nucleic acids and the polypeptides they encode may be used in the prevention, treatment and diagnosis of
                                                                                                                                                                                                                               Claim 7;
                                                                                                                                                                                                                                                      Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety or diseases, and for diagnosis of those diseases.
                                                                                                                                                                                                                                                                                                                                                                 Dumas Milne Edwards
                                                                                                                                                                                                                                                                                                                                     WPI; 2001-367870/38
                                                                                                                                                                                                                                                                                                                                                                                                                            06-MAR-2000; 2000US-0187470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-DEC-2000; 2000WO-IB01938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200142451-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH64741 standard;
                                                                                                                                                                                                                                                                                                                      P-PSDB; AAG89138
                                                                                                                                                                                                                                                                                                                                                                                             (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                          08-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH64741;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aatct 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ttcctaattgcagtgaaaagaaaaccacagaaactctgggaatttttgattacattgatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acctttcttttggggttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aaattatttgctagaaaaatgaaaaatcttagggactatccagatcctgtttggaattatt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ttcctaattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        secreted; ss.
                                                                                                                                                                                                                             Page 576-577;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0169629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein; gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA; 747
                                                                                                                                                                                                                                                                                                                                                                 Ģ
                                                                                                                                                                                                                            921pp;
                                                                                                                                                                                                                                                                                                                                                                 Bougueleret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO:
                                                                                                                                                                                                                             English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      therapy; vaccine;
                                                                                                                                                                                                                                                                                                                                                               Ļ
                                                                                                                                                                                                                                                                                                                                                                 Jobert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treatment; diagnosis;
                                                                                                                                                                                                encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            212
```

```
RESULT
AAS04281
#X A X
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 354
                                                                                                            WO200146417-A2
                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The GENSET polypeptides may be used as antigens in the production antibodies and in assays to identify modulators (agonists and antagonists) of GENSET polypeptide expression and activity. The
         Walke DW,
                                                                                                                                                                                                   physiological
                                                                                                                                                                                                                                  Nove1
                                                                                                                                                                                                                                                    26-SEP-2001
                                                                                                                                                                                                                                                                        AAS04281;
                                                                                                                                                                                                                                                                                           AAS04281 standard; cDNA; 417
                            (LEXI-) LEXICON GENETICS
                                                 22-DEC-1999;
                                                                     12-DEC-2000;
                                                                                         28-JUN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                present sequence
                                                                                                                                                                                                                                                                                                                                              433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                            313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        193
                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                     373
                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 354; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 atggattcaagcaccgcacacagtccggtgtttcttggtatttcctccagaaatcactgct 60
                                                                                                                                                                                                                                                                                                               տ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                             aattt 437
                                                                                                                                                                                                                                                                                                                                                                acttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            accttttcttttggagttatcttccttttcactttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                                                                                                  ttcctaattgcagtgaaaagaaaaccacagaaactctgataatattgagccgaataatg
                                                                                                                                                                                                                                                                                                                                                                                          ttcctaattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                                                                                                                        tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                human
                                                                                                                                                                                                  membrane protein; membrane receptor; IgE receptor; CD20;
logical disorder; ss.
         Turner CA;
                                                                                                                                                                                                                               membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP; 240 A; 145 C;
                                                                     2000WO-US33742
                                                                                                                                                                                                                                                  (first entry)
                                                 99us-0171567.
                                                                                                                                       Location/Qualifiers
1..417
/*tag= a
                                                                                                                              /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               is a GENSET nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77.2%;
97.0%;
                                                                                                                                                                                                                               protein #3 cDNA sequence.
                                                                                                                             "Human membrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 347.4;
Pred. No. 3e-8
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 G; 241 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     347.4; DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                               #3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    132
                                                                                                                                                                                                                                                                                                                                                                                                                           372
                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
The present sequence encodes for novel human membrane protein #3. Human membrane protein # 3 is 1 of 4 human membrane proteins (AAU01210-AAU01213) given in the present invention: These membrane proteins share structural similarity with membrane receptors such as the IgE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonists, antagonists and modulators of the membrane proteins, and for producing antibodies specific to the membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The polynucleotides encoding the membrane proteins can be used to generate PCR primers or probes to identify mutations associated with a particular and primers or probes to identify mutations associated with a particular protein.
                                                                                                                                                                                                                                                                                                                                                                                                   Polynucleotide encoding novel human membrane protein, useful for identifying agonist, antagonist or modifiers or for producing antibodies useful in therapeutic, diagnostic and pharmacogenomic
Sequence 417
                                                                                                                                                                                                                                                                                                                                             Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-408646/43.
P-PSDB; AAU01212.
                                                                                                                                                                                                                                                                                                                                             Page
BP;
115
                                                                                                                                                                                                                                                                                                                                             30;
Α;
                                                                                                                                                                                                                                                                                                                                           32pp; English
91 C;
69
G; 142
Τ;
0
other;
                                                          with a particular
```

```
Q
                                                         Qy
                                                                                     밁
                                                                                                            QΥ
                                                                                                                                       밁
                                                                                                                                                              δã
                                                                                                                                                                                        밁
                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                               δÃ
                                    멍
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 354
             361
                                                                                                                                                               181
                                    301
                                                            301
                                                                                     241
                                                                                                              241
                                                                                                                                       181
                                                                                                                                                                                                                 121
                                                                                                                                                                                        121
                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                           μ,
                                                                                                                                                                                                                                                                                                                    ب
actttcagcattattg
                                                                                                                                                accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                                                                                                    atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                              ttcctaattgcagtgaaaagaaaaaccacagaaactctggggaattttgattacattgatg
                                                                                                tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                        atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                ttcctaattgcagtgaaaagaaaaccacagaaactctgatcaaaactacatttgtggtt
                                                                                                                                   accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                    aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                                                                                                                                                                                 aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatt
                                                                                                                                                                                                                                                  tcagaatatgagtccacagaactttcagccacgacctttcaactcaaagccccttgcaa 120
                                                                                                                                                                                                                                                                                                                                          354;
                                                                                   tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                       tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                   75.7%;
94.1%;
          376
                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                         Score 340.8; 1
Pred. No. 1.5e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                       .5e-81;
                                                                                                                                                                                                                                                                                                                                                                  DВ
                                                                                                                                                                                                                                                                                                                                          22;
                                                                                                                                                                                                                                                                                                                                                               22;
                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                  417;
                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                     180
                                                                                                            300
                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                 60
                                                                                    300
                                                                                                                                   240
                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                         0
```

RESULT AAC03080

σ

AAC03080 standard; cDNA;

372

밁

361

attctcaccaaaatag

376

XXXX DEX ACX

AAC03080; 06-OCT-2000

(first

entry

Human secreted

EST,

SEQ ID

. NO

3078

Human; gene ti

ű

EST;

protein 5' expressed

mapping; ss.

protein;

cDNA isolation;

therapy; chromosome

Ç

```
RESULT
AAH64745
                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X0000000000000000XX
DXXXX
                                                                                                                                                                     QΥ
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Sin
Matches 289;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is one of a large number of 5' ESTs derived from mRNAs encoding secreted proteins. An ORF has been identified within the sequence. The 5' ESTs were prepared from total human RNAs or polyAr RNAs derived from 30 different tissues. EST sequences usually correspond mainly to the 3' untranslated region (UTR) of the mRNA because they are often obtained from oligo-dT primed cDNA libraries. Such ESTs are not well suited for isolating cDNA sequences derived from the 5' ends of mRNAs and even in those cases where longer cDNA sequences have been obtained, the full 5' UTR is rarely included. 5' ESTs are derived from mRNAs with intact 5' ends and can therefore be used to obtain full length cDNAs and genomic DNAs. 5' ESTs are also used in diagnostic, forensic, gene therapy and chromosome mapping procedures. They are used to obtain upstream regulatory sequences and to design expression and secretion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New nucleic acid that is a 5' expressed sequence tag (5' EST) for obtaining cDNAs and genomic DNAs that correspond to 5'ESTs and for diagnostic, forensic, gene therapy and chromosome mapping procedures
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-500381/45.
P-PSDB; AAG03074.
11-SEP-2001
                                 AAH64745;
                                                                AAH64745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID 3078;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dumas Milne Edwards J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-FEB-2000; 2000EP-0200610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EP1033401-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GEST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                            240
                                                                                                                                                                                                              253
                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                         133
                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                          73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                        _
                                                                                                                                                                                                                                                                                          aaaattatttgctagaaaaatgaaaatcttagggactatccagatcctgttttggaattat 179
                                                                                                                                                                                                                                                                                                                                                     tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgc-a 119
                                                                                                                                                           ctttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagc
                                                                                                                                                                                                            gnccttttcttttggagttatcttccttttmaccttgtndaaaccatatccaaggtttcc
                                                                                                                                                                                                                          gacctttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttcc
                                                                                                                                                                                                                                                                         aaaattatttgctagaaaaatgaaaatcttagggactatccagawcctgtttggaattat
                                                                                                                                                                                                                                                                                                                                        tcaraatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                                                                                                                                                                                                      atggattcaagcaccgcacacagtccggtgtttctggtatnhcctccagaaatcactgct 132
                                                                                                                                                                                                                                                                                                                                                                                                                         atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 60
                                                                standard; cDNA; 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        372 BP; 105 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0122487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62.4%;
96.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71pp + CD-ROM; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Duclert A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 280.8; DB 2
Pred. No. 1.3e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G; 117 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Giordano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                          299
                                                                                                                                                                                                                                                                                                                                         192
                                                                                                                                                                                                            312
                                                                                                                                                                                                                                           239
                                                                                                                                                                                                                                                                           252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
```

```
ΩY
                         Ş
                                                               밁
                                                                                            Qy
                                                                                                                              닭
                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                            SXCCCCCCCCCCCCCCCX SXTTTTX RRXTX RXX RXX EX
멍
                                                                                                                                                                                                                                                                                                                                                                    The invention relates to full length GENSET human nucleic acids encoding CC potentially secreted proteins. The nucleic acids and the polypeptides CC they encode may be used in the prevention, treatment and diagnosis of CC diseases associated with inappropriate GENSET gene expression. For CC example, they be used to treat disorders associated with decreased CC GENSET gene expression by rectifying mutations or deletions in a CC patient's genome that affect the activity of GENSET or by supplementing CC the patients own production of GENSET polypeptides. Conversely, CC antisense nucleic acid molecules may be administered to down regulate CC entire expression. The sense and antisense nucleic acids may also be CC used as DNA probes in diagnostic assays to detect and quantitate the presence of similar nucleic acid sequences in samples, and hence to CC determine which patients may be used as antigens in the production of CC antibodies and in assays to identify modulators (agonists and and activity. The CC present sequence is a GENSET polypeptide expression and activity. The
                                                                                                                                                                                                                                                           Best Local Similarity Matches 347; Conserv
                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Full length GENSET human nucleic acids encoding potentially secreted proteins, useful in gene therapy and vaccination against a variety of diseases, and for diagnosis of those diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human secreted
                                                                                                                                                                                                                                                                                                                                            Sequence 468 BP; 155 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dumas Milne Edwards J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-DEC-1999;
06-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-DEC-2000; 2000WO-IB01938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200142451-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENSET;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-JUN-2001
228
                                181
                                                               196
                                                                                               121
                                                                                                                              136
                                                                                                                                              61 tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                                                                                                                                                              76
                                                                                                                                                                                                               1 atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-367870/38.
DB; AAG89142.
                                                                             aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg
                                                                                                                                                                                            atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct 135
                             accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                               aaattatttgctagaaaaatgaaaatcttagg---
                                                                                                                              tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           secreted protein; gene
; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 581; 921pp; English.
                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0169629
2000US-0187470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein cDNA,
                                                                                                                                                                                                                                                                           52.0%;
77.1%;
                                                                                                                                                                                                                                                                                                                                            94 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bougueleret L,
                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                           Score 234; DB 22;
Pred. No. 4.1e-53;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                            81 G; 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          therapy; vaccine;
                                                                                                                                                                                                                                                                                                                                            H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jobert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                            0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            treatment; diagnosis;
                                                                                                                                                                                                                                                                                            Length 468
                                                                                                                                                                                                                                                               Indels 103;
                                                                                                                                                                                                                                                           Gaps
                                                                                               180
                             240
                                                                                                                                195
227
                                                               227
```

γ

241

tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc

300

ب

420 332 360 272

0

```
RESULT
AAS04280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                      Polynucleotide encoding novel human membrane protein, useful for identifying agonist, antagonist or modifiers or for producing antibodies useful in therapeutic, diagnostic and pharmacogenomic
                                                                                                                                                                                                              WPI; 2001-408646/43.
P-PSDB; AAU01211.
                                                                                                                                                                                                                                                                           22-DEC-1999;
                                                                                                                                                                                                                                                                                             12-DEC-2000; 2000WO-US33742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAS04280 standard;
                                                                                                                                                                                                                                                          (LEXI-) LEXICON GENETICS INC
                                                                                                                                                                                                                                                                                                                                 WO200146417-A2
                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                 physiological disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAS04280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gaggattgtgattgtgaacaatgttgttga 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gaggattgtgattgtgaacaatgttgttga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acttcagcattattgaattattcatttctctgcctttctcaattttggggtgccactca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        actttcagcattattgaattattcatttctctgcctttctcaatttttggggtgccactca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ttcctaattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ttcctaattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                                                                                                                                                                                                                                                                                                          human membrane protein #2 cDNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                           99US-0171567
                                                                                                                                                                                                                                                                                                                                                                                                                         protein; membrane
                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1..246
/*tag= a
                                                                                                                                                                                                                                                                                                                                                /product= "Human membrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA; 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -ggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                                                                                                                                                                                                                                                                  SS
                                                                                                                                                                                                                                                                                                                                                                                                                       receptor; IgE receptor; CD20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               450
```

The present sequence encodes for novel human membrane protein #2. Human membrane proteins (AAU01210-AAU01213) given in the present invention. These membrane proteins share structural similarity with membrane receptors such as the IgE receptor and mammalian CD20. The novel human membrane proteins are useful for identifying agonists, antagonists and modulators of the membrane proteins, and for producing antibodies specific to the membrane proteins. The membrane proteins can be used for diagnosis, drug screening, pharmacogenomic applications, clinical trial monitoring and the treatment of physiological disorders and diseases. The PCR primers or probes to identify mutations associated with a particular attacks. Disclosure; Page 30; 32pp; English used to generate d with a particular

246 B₽; 60 A; 45 Ç 47 <u>ი</u> 94 ₽, 0 other;

AAZ36228-49 encode bone marrow secreted proteins of human bone marrow stromal cells. The proteins can exhibit cytokine, cell proliferation, or cell differentiation activity (either inducing or inhibiting). They can be used to support colony forming cells or factor-dependent cell lines,

ဝင္ပ

Claim

11;

English

```
RESULT
AAZ36238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                 30-DEC-1997;
24-SEP-1998;
30-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Bone marrow secreted protein; bone marrow stromal cell; cytokine; cell proliferation; cell differentiation; hematopoiesis; anaemia; myeloid cell deficiency; lymphoid cell deficiency; myeloid cell; erythroid progenitor cell; colony stimulating factor; granulocyte; monocyte; macrophage; myelo-suppression; megakaryocyte; platelet; platelet disorder; thrombocytopenia; hematopoeitic stem cell; stem cell disorder; aplastic anaemia; bone differentiation; paroxysmal nocturnal hemoglobinuria; bone growth; cartilage; tendon; ligament; nerve; wound healing; tissue repair; burn; incision; ulcer bone fracture; cartilage damage; artificial joint; ss.
                                                                             New isolated human production of other
                                                                                                                            WPI; 2000-038344/03.
                                                                                                                                                     Lin
                                                                                                                 P-PSDB; AAY53632.
                                                                                                                                                                                                                                                                       08-JUL-1999.
                                                                                                                                                                                                                                                                                                                               polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                           (CHIR ) CHIRON
                                                                                                                                                                                                                                                                                              WO9933979-A2
                                                                                                                                                                                                                                                                                                                                                      sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA encoding a bone marrow secreted protein designated BMS208.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ36238 standard; cDNA; 1563
                                                                                                                                                                                                                                               18-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                    Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tgggaattttgattacattgatgactttcagcattattgaattattcatttccttgcctt 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgttga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tgggaattttgattacattgatgactttcagcattattgaattattcatttctctgcctt 193
                                                                                                                                                    Cao
                                                     Page 92-94; 120pp;
                                                                           human polynucleotide and secreted f other cytokines in certain cell [
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                97US-0068958.
98US-0101603.
98US-0102540.
                                                                                                                                                                           CORP
                                                                                                                                                                                                                                               98WO-US27008
                                                                                                                                                                                                                                                                                                                            /*tag= b
1531..1536
                                                                                                                                                                                                                                                                                                                                                    /*tag= a
/product=
255..440
                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers 255..758
                                                                                                                                                                                                                                                                                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25.1%;
                                                                                                                                                                                                                                                                                                                                                                "bone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 113; I
Pred. No. 5
                                                                                                                                                                                                                                                                                                                                                                 marrow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                               secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .6e-21;
                                                                           d proteins can populations -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                       incision; ulcer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246;
                                                                                        induce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

```
문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                myelo-suppression, to support the growth and proliferation of comegakaryocytes and platelets, thereby allowing prevention or treatment of of platelet disorders such as thrombocytopenia, to support the growth and proliferation of hematopoeitic stem cells, either in place of or in conjunction with platelet transfusions, to treat stem cell disorders, such as aplastic anaemia and paroxysmal nocturnal hemoglobinuria, or to repopulate the stem cell compartment after irradiation or chemotherapy. They can be used for growth or differentiation of bone, cartilage, tendon, ligament, or nerve tissue, as well as for wound healing and tissue repair and replacement, and in the treatment of burns, inclisions and ulcers, to induce cartilage and/or bone growth in circumstances where bone is not normally formed and thus have an application in healing bone fractures and cartilage damage or defects, prophylactic use in fracture reduction and also in the improved fixation of artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Sin
Matches 160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  to regulate hematopoiesis, and to treat myeloid or lymphoid cell deficiencies. In addition, they may be used to support the growth and proliferation of erythroid progenitor cells, and to treat various anaemias. They can have colony stimulating factor (CSF) activity and be used to support the growth and proliferation of myeloid cells such
26-JUL-1999; 99US-0145695
17-MAR-2000; 2000US-0190259
                                                                                       01-FEB-2001
                                                                                                                                                                                                                                                 Oligonucleotide D1835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        granulocytes,
                                                     26-JUL-2000; 2000WO-US20476
                                                                                                                          WO200107665-A2
                                                                                                                                                           Synthetic
                                                                                                                                                                                              gene expression; ss
                                                                                                                                                                                                            Electron-transfer group;
                                                                                                                                                                                                                                                                                    24-APR-2001
                                                                                                                                                                                                                                                                                                                      AAF58252;
                                                                                                                                                                                                                                                                                                                                                      AAF58252 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1563 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sauro
                                                                                                                                                                                                                                                                                                                                                                                                                                             604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119 aaaaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaatta
                                                                                                                                                                                                                                                                                                                                                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ccttcctaattgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgaccttttcttttggagttatcttccttttcaccttgttaaaaaccatatccaaggtttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            agaagttcttgaagggagaacccaaagtccttggggttgtgcagattctgactgccctga
                                                                                                                                                                                                                                                                                                                                                                                                                                          tcctcttaagtgtgctggaattctgcattgctgtgtccctctctgcctttggatg
                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgactttcagcattattgaattattcatttctctgccttttctcaatttttggggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ccttgtcaattgcagcaggaattagaactacaaaaggcctgggtctggatggcatggtgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ctatttccgtgtatatcgggtacacaatttgggggtcagtaatgtttattatttcaggat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tgagccttagcatgggaataacaatgatgtgtatggcatctaatacttatggaagtaacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cctttatatttctttcaggatatccattctggggctctgttttgttcattaattctggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     monocytes or macrophages, to prevent or treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      477 A; 308 C;
                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17.6%;
                                                                                                                                                                                                                                                                                                                                                         936
                                                                                                                                                                                                           ETM; mismatch; genotyping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 79;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      309 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.1e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      469 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1563;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                           658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          healing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       can
h as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
AAF58254
ID AAF
                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                       ДЬ
                                                                                                                                                                                                                                                                                                   ρ
                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Umek
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to a composition comprising acids each containing an electron-transfer group (ETM) has
         WO200107665-A2
                             Synthetic
                                                                                Oligonucleotide D1875
                                                                                                                                             AAF58254 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 936 BP; 4 A; 139 C; 10 G; 7 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              monitoring gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic acids containing electron-transfer group, useful as labels in hybridization assays, e.g. for genotyping, allowing repeat analyses on
                                                           Electron-transfer group;
                                                                                                    24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 6; Page 127; 159pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (CLIN-) CLINICAL MICRO SENSORS INC
                                                                                                                                                                                                435
                                                                                                                                                                                                                   391
                                                                                                                                                                                                                                       375
                                                                                                                                                                                                                                                            331
                                                                                                                                                                                                                                                                                                    271
                                                                                                                                                                                                                                                                                                                         255
                                                                                                                                                                                                                                                                                                                                            211
                                                                                                                                                                                                                                                                                                                                                                  195
                                                                                                                                                                                                                                                                                                                                                                                     151
                                                                                                                                                                                                                                                                                                                                                                                                           135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single surface
                                                                                                                                                                                                                                                                                                                                                                                                                             91
                                                                                                                                                                                                                                                                                                                                                                                                                                                  75
                                                                                                                                                                                                                                                                                                                                                                                                                                                          11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single-nucleotide polymorphisms, e.g. for genotyping,
                                                                                                                                                                                                                                                  2001-159728/16
                                                 expression;
                                                                                                                                                                                                                 ctgcctttctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgtt 448
                                                                                                                                                                                                                                                                                                                         acgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatctta
                                                                                                                                                                                                                                                                                                                                                                                                                                                ggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaccaca
                                                                                                                                                                                                                                                                                                                                                                 gggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         l Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                    (first entry)
                                                                                                                                             DNA; 936 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16.4%;
1.7%; F
                                                           ETM; mismatch; genotyping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 2.5e
61; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 73.6;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            776 other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              936;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                492
                                                                                                                                                                                                                                                                                                                                                                                                          194
                                                                                                                                                                                                                                                                                                                                                                                                                             150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90
                                                                                                                                                                                                                                                                                                    330
                                                                                                                                                                                                                                                                                                                                            270
                                                                                                                                                                                                                                                                                                                                                                  254
                                                                                                                                                                                                                                                                                                                                                                                     210
```

0,

```
RESULT 1
                                                                                                                                                                                          VQ
                                                                                                                                                                                                                В
  XXX DT XXX
                                                                                                                                                    Qγ
                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
Electron-transfer group;
                     Oligonucleotide D1954.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to a composition comprising two nucleic acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping, monitoring gene expression.
                                         24-APR-2001
                                                                                 AAF58257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 6; Page 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acids 
hybridization
                                                                                                                                  435
                                                                                                                                                                                            331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Umek RM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CLIN-) CLINICAL MICRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-JUL-1999;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-JUL-2000;
                                                                                                                                                      391
                                                                                                                                                                          375
                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                       255
                                                                                                                                                                                                                                    271
                                                                                                                                                                                                                                                                                                                151
                                                                                                                                                                                                                                                                                                                                     135
                                                                                                                                                                                                                                                                                                                                                        91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single surface
                                                                                                                                                                                                                                                                                                                                                                           75
                                                                                                                                                                                                                                                                                                                                                                                             31
                                                                                                                                                                        ctgcctttctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgtt
                                                                                                                                                                                                              ggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaccaca 330
                                                                                                                                                                                                                                                    gggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttttc
                                                                                                                                                                                                                                                                                                                                             acgacctttcaactcaaagccccttgcaaaaattatttgctagaaaaattgaaaatctta 150
                                                                                                                                                                                                                                                                                          tttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcagcc 90
                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 1.79 7; Conservative
                                                                                standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                936 BP; 4 A; 144 C; 7
                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0190259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    containing assays, e.g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9905-0145695
                                                                                                                                                                                                                                                                                                                                                                                                                        16.4%;
1.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159pp;
                                                                                936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SENSORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ġ
ETM; mismatch; genotyping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   electron-transfer group, useful as \mathfrak z. for genotyping, allowing repeat \mathfrak z
                                                                                                                                                                                                                                                                                                                                                                                                               ; Pred. No. 2.6e-
261; Mismatches
                                                                                ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        English.
                                                                                                                                                                                                                                                                                                                                                                                                                         Score 73.6;
red. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                G; 5 T; 776 other;
                                                                                                                                                                                                                                                                                                                                                                                                                          6e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                150;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 936;
                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  s labels in
analyses on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   analyses
                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                   448
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                        434
                                                                                                                                                                                                                                                    314
                                                                                                                                                                                                                                                                       270
                                                                                                                                                                                                                                                                                                              210
                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

ACX

standard;

DNA;

936

ВP

AAF58259 AAF58259

```
AAF58259
                                      엉
                                                       Ş
                                                                           밁
                                                                                           δÃ
                                                                                                                Db
                                                                                                                                 δÃ
                                                                                                                                                     В
                                                                                                                                                                     Qy
                                                                                                                                                                                          밁
                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                    γ
                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                        and single-nucleotide polymorphisms, e.g. for genotyping,
monitoring gene expression.
                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to a composition comprising two nuclei acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nucleic acids containing electron-transfer hybridization assays, e.g. for genotyping, a single surface .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Umek
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 6; Page 127; 159pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-159728/16
                                      435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CLIN-) CLINICAL MICRO SENSORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JUL-1999;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200107665-A2
                                                        391
                                                                           375
                                                                                              331
                                                                                                                                   271
                                                                                                                                                      255
                                                                                                                                                                        211
                                                                                                                                                                                           195
                                                                                                                                                                                                             151
                                                                                                                                                                                                                                135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-JUL-2000;
                                                                                                                                                                                                                                                 91
                                                                                                                                                                                                                                                                          Local
                                     gggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttttc
                                                                                                                                                                                                                                       acgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatctta 150
                                                                                                                                                                                                                                                                 ctgcctttctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgtt 448
                                                                                                                                 ggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccaca 330
                                                                                                                                                                                          expression;
                                                                                                                                                                                                                                                                                                        Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                       936
                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                       BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0190259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0145695
                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SS
                                                                                                                                                                                                                                                                                                                                                     A; 142 C; 7 G; 6 T; 776 other
                                                                                                                                                                                                                                                                                                                16.48;
                                                                                                                                                                                                                                                                                                       261;
                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                Score 73.6;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INC
                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                .6e-10;
                                                                                                                                                                                                                                                                                                                         DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  group, useful as labels allowing repeat analyses
                                                                                                                                                                                                                                                                                                      150;
                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                          936;
                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   labels in
analyses on
                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic
                                                                                                                                                                                                                                                                                                      Gaps
                                    492
                                                                                                              374
                                                                                                                                                    314
                                                                                                                                                                                                          210
                                                                                                                                                                                                                              194
                                                                                                                                                                                         254
```

0

```
δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                 Ş
                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                  В
밁
                                           δÃ
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRESENTATION OF THE PROPERTY O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to a composition comprising two nuclei acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping, monitoring gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 936 BP; 6 A; 138 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 6; Page 128; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nucleic acids containing electron-transfer group, useful as labels in hybridization assays, e.g. for genotyping, allowing repeat analyses on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-JUL-1999;
17-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JUL-2000; 2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200107665-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Electron-transfer group; ETM; mismatch; genotyping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (CLIN-) CLINICAL MICRO SENSORS
                                                 391
                                                                                                  375
                                                                                                                                                      331
                                                                                                                                                                                                       315
                                                                                                                                                                                                                                                         271
                                                                                                                                                                                                                                                                                                             255
                                                                                                                                                                                                                                                                                                                                                              211
                                                                                                                                                                                                                                                                                                                                                                                                                     195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31
                                                                                                                                gggactatccagatcctgtttggaattatgaccttttctttttggagttatcttccttttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      expression;
                                           ctgcctttctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgtt
                                                                                                                                                                                                       ggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaccaca
                                                                                                                                                                                                                                                                                                             acgacctttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatctta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-0190259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0145695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 73.6; DB 2
Pred. No. 2.6e-10;
61; Mismatches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   776 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
492
                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                      330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                              270
```

0;

0,

```
RESULT 14
AAF58262
ID AAF582
XX AAF582
XX AAF582
XX AAF582
AC AAF582
XX 24-APR
XX Clectr
KW Gene e
XX Synthe
PN WO2001
XX WO2001
PP 26-JUI
PP 26-JUI
PR 26-JUI
PR 26-JUI
PR 26-JUI
PR 26-JUI
PR 17-MAF
XX Umek I
XX Umek I
XX Nuclei
PT A Sing
PT A Sing
PT A Sing
PT A Golds
CC The PI
CC and s
CC diffe
CC detect
CC SQ Sequel
                                                                                                                                                                                        Q
                                                                     Ş
                                                                                                   B
                                                                                                                             δÃ
                                                                                                                                                           밁
                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                              δÃ.
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                         acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oligonucleotide D2007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF58262 standard; DNA; 936
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 936 BP; 5 A; 139 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acids containing el hybridization assays, e.g. a single surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-JUL-1999; 99US-0145695
17-MAR-2000; 2000US-0190259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200107665-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                             monitoring gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to a composition comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 6; Page 128; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CLIN-) CLINICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-JUL-2000; 2000WO-US20476
             331
                                                                                                                                211
                                                                                                                                                              195
                                                                                                                                                                                          151
                                                                                                                                                                                                                       135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single surface
                                                                                                                                                                                                                                                                                                                                       Local Similarity nes 7; Conserv
                                                                                                                                                                                                                                                    91
                                                                                                                                                                                                                                                                                75
                                                                                                                                                                                                                                                                                                         31 tttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactttcagcc 90
                                                                                                                    gaaactctgggaattttgattacattgatgactttcagcattattgaattattct
                                                                                                                                                              expression;
                                           ggctctgttttgttcattaattctggagccttcctaattgcagtgaaaagaaaaccaca
                                                                                                    gggactatccagatcctgtttggaattatgaccttttcttttggagttatcttccttttc
                                                                                                                                                                                                                                                 acgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatctta
                                                                                                                                                                                                                                                                                Conservative 261; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
= :::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MICRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               group;
                                                                                                                                                                                                                                                                                                                                                     16.4%;
1.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SENSORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             electron-transfer group, useful as labels g. for genotyping, allowing repeat analyses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ETM;
                                                                                                                                                                                                                                                                                                                                                      Score 73
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mismatch;
                                                                                                                                                                                                                                                                                                                                                                                                                <u>ن</u>
::
                                                                                                                                                                                                                                                                                                                                                                                                                6 T;
                                                                                                                                                                                                                                                                                                                                                        73.6;
No. 2.
                                                                                                                                                                                                                                                                                                                                                        6e-10
                                                                                                                                                                                                                                                                                                                                                                                                                 776 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genotyping;
                                                                                                                                                                                                                                                                                                                                                                    DB 22;
                                                                                                                                                                                                                                                                                                                                        150;
::
                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                          Indels
...
                                                                                                                                                                                                                                                                                                                                                                      936;
                                                                                                                                                                                                                                                                                                                                        0;
             390
                                                                                                    314
                                                                                                                                270
                                                                                                                                                              254
                                                                                                                                                                                                                       194
```

Ъ

```
В
                     δÃ
                                               밁
                                                                 QΥ
                                                                                            망
                                                                                                                δÃ
                                                                                                                                        В
                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Z Z Z Z Z Z Z Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF58255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                                                     Query Match 16.4%; Score 73.6; DB 22; Best Local Similarity 1.7%; Pred. No. 2.6e-10; Matches 7; Conservative 261; Mismatches 150;
                                                                                                                                                                                                                                                                              The present invention relates to a composition comprising two nucleic acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping,
                                                                                                                                                                                                                                                                                                                                                                            Nucleic acids containing electron-transfer group, useful as labels in hybridization assays, e.g. for genotyping, allowing repeat analyses on a single surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-JUL-1999; 99US-0145695.
17-MAR-2000; 2000US-0190259.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Electron-transfer group; ETM; mismatch; genotyping;
gene expression; ss.
                                                                                                                                                                                                                                              Sequence 938 BP; 4 A; 144 C; 9 G; 5 T; 776 other;
                                                                                                                                                                                                                                                                     monitoring gene expression.
                                                                                                                                                                                                                                                                                                                                                   Example 6; Page 127; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-159728/16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-FEB-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200107665-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oligonucleotide D1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF58255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF58255 standard; DNA; 938
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Umek RM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-JUL-2000; 2000WO-US20476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CLIN-) CLINICAL MICRO SENSORS
  255
                                            135
                        211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91
                                                                                                                                        75
                                                                                                                                                   acgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatctta 150
                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                      Indels
                                                                                                                                                                                                            Length
                                                                                                                                                                                                            938;
                                                                                                                                                                                     0
                                                                                                                                                                                    Gaps
                                                                                                                                                                                     0;
```

Search completed: November 29, 2001, 00:23:54 Job time: 4311 sec

THIS PAGE BLANK (USPTO)

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic -
                                            0000
                                                                                                                                                                                      00000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      otal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9n:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
BC
                                                                                334444
334444
333.66333.444.88
333.44.88
333.44.88
333.44.88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/
2: /cgn2_6/ptodata/2/
3: /cgn2_6/ptodata/2/
4: /cgn2_6/ptodata/2/
5: /cgn2_6/ptodata/2/
6: /cgn2_6/ptodata/2/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               351203 seqs, 113238999 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-735-712-7
450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         November 28, 2001, 21:39:28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version
Copyright (c) 1993 - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  atggattcaagcaccgcaca.....attgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/2/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/FCTUS_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                       11669
11669
11661
11661
11661
11661
11721
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
11731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                US-08-916-902A-2
US-09-213-389-2
US-09-213-389-2
US-08-318-492-3
US-08-707-340-3
US-08-994-578-3
US-07-869-933-22
US-09-103-663-22
US-09-104-324B-1
US-09-162-713-1
US-09-162-713-1
US-08-568-147B-1
US-08-288-147B-1
US-08-284-941-3
US-08-284-941-3
US-08-284-941-3
US-08-284-941-3
US-08-286-1702-1
US-09-216-1702-1
US-09-236-503-3
US-09-216-1702-1
PCT-US95-13335-2
US-09-385-3330-2
US-09-846-020A-1
US-08-846-020A-1
US-08-846-020A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.5
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (without alignments)
1216.461 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Search time 83.78 Seconds
                                      sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
sequence
                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                              Sequence
                     Sequence
e 300, A<sub>1</sub>
1, Appli
Appli
                                                                          5, Appli
5, Appli
5, Appli
3, Appli
3, Appli
4, Appli
1, Appli
1, Appli
                                                                                                                                                                                                                                                                                                                                             22, Appl
22, Appl
14, Appli
1, Appli
1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2, Appli
2, Appli
3, Appli
3, Appli
3, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-916-902A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No.
```

ဂ	a	O	ი	ဂ													
45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	22
30.2	30.2	30.2	30.4	30.4			30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4
6.7	6.7	6.7	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	σ.
2529	376	315	22846	22846	4699	4699	4699	4699	4699	4699	4699	4699	4699	4699	4699	4699	4699
N	N	N	ω	2	4	N	N	N	N	N	<u>, , , , , , , , , , , , , , , , , , , </u>	۲	Н	-4	_	_	+
US-08-883-795A-37	US-08-623-906A-18	US-08-743-200-1	US-07-890-609-3	US-08-469-461-3	US-09-350-600-6	US-08-971-217-6	US-08-455-736-6	US-08-456-240-6	US-08-456-262-6	US-08-457-364-6	US-08-454-876-6	US-08-455-244-6	US-08-455-416-6	US-08-456-265A-6	US-08-449-043-6	US-08-444-803-6	US-U8-449-315-6
Sequence 37,	Sequence 18,	Sequence 1,	Sequence 3,	Sequence 3,	Sequence 6,	Sequence 6,	Sequence 6,	Sequence 6,	Sequence 6,	Sequence 6,	sequence b,						
Api	, App	Appl	App1:	Appl	Appl	App1i	Appl:	Appli	Appli	Appl	Appli	App1:	Appli	Appli	Appli	App1	Appr

ALIGNMENTS

```
; TOPOLOGY: linea; IMMEDIATE SOURCE: BRAINC LIBRARY: BRAINC CLONE: 927955 US-08-916-902A-2
                                                                                                                                                                                                                                                               FILING DATE: Herewith
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION UMBER:
FILING DATE:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION UMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Bandman, Olga
APPLICANT: Lal, Preeti
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: HIGH AF
TITLE OF INVENTION: RECEPTO
NUMBER OF SEQUENCES: 4
                                                                                                                             INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1669 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/916,902A
                                                                                                                                                                                                                            TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 3174 POR CITY: Palo Alto STATE: CA COUNTRY: USA
                                                                                          STRANDEDNESS:
                                                                                                              TYPE: nucleic acid
                                                                                                                                                                                                        TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Incyte Pharmaceuticals, Inc STREET: 3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2, Application 
5. 5871930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94304
                                       BRAINOT 04
                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RECEPTOR-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HIGH AFFINITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08916902A
                                                                                                                                                                                                                                                                   PF-0371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IMMUNOGLOBULIN
                                                                                                                                                                                                                                                                   SD
```

Query Match Best Local Similarity

14.8%;

Length 1669;

```
Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-213-389-2
US-09-213-389-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence 2, Application US/09213389
Patent No. 5977072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 140; Conserv
                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:

NAME: Billings, Lucy J.

REGISTRATION NUMBER: 36,749

REFERENCE/DOCKET NUMBER: PF-C
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/213,389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Lal, Preeti
APPLICANT: COTIEY, Neil C.
TITLE OF INVENTION: HIGH A
TITLE OF INVENTION: RECEPT
NUMBER OF SEQUENCES: 4
                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                              IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
   LIBRARY: bin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 299 ccttcctaattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattga 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119 aaaaattattgctagaaaaatgaaaatcttagggactatccagatcctgtttggaatta 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             325 AGAAGTTCTTGAAGGGAGAACCCAAAGTCCTTGGGGTTGTGCAGATTCTGACTGCCCTGA 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 31/-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             385 TGAGCCTTAGCATGGGAATAACAATGATGTGTATGGCATCTAATACTTATGGAAGTAACC 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Incyre Prive
                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                               STRANDEDNESS:
                                                                                                                                                                                   TELEFAX:
                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cctttatatttctttcaggatatccattctggggctctgttttgttcattaattctggag 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tgacctttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tgactttcagcattattgaatt 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTATTTCCGTGTATATCGGGTACACAATTTGGGGGGTCAGTAATGTTTATTATTTCAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGAATATCACCAGCTCTGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTTGTCAATTGCAGCAGGAATTAGAACTACAAAAGGCCTGGTCCGAGGTAGTCTAGGAA 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94304
                                                                                              nucleic acid
                                                                                                            1669 base pairs
                                                                                                                                                                                   415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bandman, Olga
                              BRAINOT 04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Incyte Pharmaceuticals, Inc
                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HIGH AFFINITY IMMUNOGLOBULIN RECEPTOR-LIKE PROTEIN
                                                                                                                                                                                                                                                                                                                08/916,902
                                                                                                                                                                                                                                 PF-0371 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 66.8;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; DB 2;
1.3e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
RESULT 3
US-08-318-492-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρy
; LOCATION:
US-08-318-492-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3, Application US/08318492
Patent No. 5552312
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 140;
                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: BIH
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6240
                                                                                                                                                                                            TELEFAX: (617) 861-95
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Lim, Bing
APPLICANT: Adra, Chaker N:
APPLICANT: Lelias, Jean-Michel
TITLE OF INVENTION: RECOMBINANT HTM4 GENE, PROTEIN AND
TITLE OF INVENTION: ASSAYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                    FEATURE:
NAME/KEY:
                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 1661 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            179 tgaccttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttc 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119 aaaaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaatta 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             565 TGAATATCACCAGCTCTGTACT 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       505 CCTTGTCAATTGCAGCAGGAATTAGAACTACAAAAGGCCTGGTCCGAGGTAGTCTAGGAA 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     239 cetttatatttettteaggatateeatteetggggetetgttttgtteattaatteetggag 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      325 AGAAGTTCTTGAAGGGAGAACCCAAAGTCCTTGGGGGTTGTGCAGATTCTGACTGCCCTGA 384
                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE:
                                                                                              TOPOLOGY:
                                                                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTATTTCCGTGTATATCGGGTACACAATTTGGGGGTCAGTAATGTTATTATTTCAGGAT 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tgactttcagcattattgaatt 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ccttcctaattgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattga 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAGCCTTAGCATGGGAATAACAATGATGTGTATGGCATCTAATACTTATGGAAGTAACC 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lexington
                                                                                                                                nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                        linear
                                                                        DNA (genomic)
                                                                                                                                                                                                              861-9540
                                                                                                                                                                                                                                                                                                                                                   530
                                                                                                                                                                                                                                                                                                                                                                                       US/08/318,492
                                                                                                                                                                                                                                                                         BIH94-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 66.8; DB 2;
Pred. No. 1.3e-09;
0; Mismatches 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith & Reynolds,
                                                                                                                                                                                                                                                                                                                                                                                                                         Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

Length 1661;

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
;
US-08-707-340-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-707-340-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                          TELEFAX: (617) 861-9540
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: BII
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 536
PRIOR APPLICATION UNARA:
APPLICATION UNABER: US 08/318,492
FILING DATE: 06-OCT-1994
PRIOR APPLICATION UNABER: US 08/675,648
APPLICATION UNABER: US 08/675,648
FILING DATE: 03-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Lim, Bing
APPLICANT: Adra, Chaker N.
APPLICANT: Lelias, Jean-Michel
TITLE OF INVENTION: RECOMBINAN
TITLE OF INVENTION: ASSAYS
                                                                       MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                       FEATURE:
                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     414 TGTTGTAGCAGGGATAAAACCCACAAGAAC 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     294 TGTCTTTCTGGGTTCCTTGCAATACCCATACCACTTCCAAAAGCACTTCTTTTTCTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           135 aaaaatgaaaatottagggactatccagatcctgtttggaattatgaccttttcttttgg 194
                                  NAME/KEY:
                                                                                          TOPOLOGY:
                                                                                                                           TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 03-SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aattgcagtgaaaaggaaaacccacagaaac 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTCTACACAGGCTACCCGATTTGGGGTGCTGTTTTTCTGTAGTTCAGGAACCTTGTC 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     atttettteaggatateeattetggggetetgttttgtteattaattetggageetteet 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      agt-----tatcttccttttcaccttgttaaaaccatatccaaggtttccctttat 245

    Application US/08707340
    5705615

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Massachusetts
                                                                                                                                              1661 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: Hamilton, Brool
Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-SEP-1996
                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10.2%; 55.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RECOMBINANT HTM4 GENE, PROTEIN AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/707,340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brook, Smith & Reynolds,
                                                                                                                                                                                                                                                        BIH94-03A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 46;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.00074;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               293
```

```
DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-994-578-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Sir
Matches 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/08994578 Patent No. 5972688
                                                                                       TELEFAX: (781) 861-954 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                       PRIOR APPLICATION UNBER: US 08/318,492
FILING DATE: 06-0CT-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: US 08/707,340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Rel CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                            NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: BI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Lelias, Jean-Michel
TITLE OF INVENTION: HTM4 METHODS OF TREATMENT AND ASSAYS.
TITLE OF INVENTION: ACONISTS AND ANTAGONISTS
FEATURE:
                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Adra, Chaker N.
APPLICANT: Lelias, Jean-Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             414 TGTTGTAGCAGGGATAAAACCCACAAGAAC 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                135 aaaaatgaaaatcttagggactatccagatcctgtttggaattatgaccttttctttttgg 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 294 TGTCTTTCTGGGTTCCTTGCAATACCCATACCACTTCCAAAAGCACTTCTTTTTTTCTTCAC 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          234 AAAATTACAAGTTCTTGGGGCCATCCAGATCCTGAATGCAGCAATGATTCTGGCTTTGGG 293
                                               TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 0 FILING DATE: 03-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: Decem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Lexington
STATE: Massachu
               TOPOLOGY:
                                   STRANDEDNESS:
                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aattgcagtgaaaagaaaaaccacagaaac 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              atttctttcaggatatccattctggggctctgttttgttcattaattctggagccttcct 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agt-----tatcttccttttcaccttgttaaaaccatatccaaggtttccctttat 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCTACACAGGCTACCCGATTTGGGGGTGCTGTTTTTTCTGTAGTTCAGGAACCTTGTC 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 55.:
L6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Two Militia Drive
                                                                                                                              (781)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              U.S.A.
                                                                                                                                                (781) 861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER: US/08/994,578
December 19, 1997
                                                                                                                                                                                                                                                                                                                                                                            03-SEP-1996
                                                                                                                              861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                        US 08/675,648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Brook,
                                                                                                                                                                                      BIH94-03A2Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 46; DB 1;
Pred. No. 0.00074;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smith & Reynolds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
US-07-869-933-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; NAME/KEY:
; LOCATION:
US-08-994-578-3
                                                                                                                                                  TELEFAX: (///),
TELEX: 899149
TELEX: 899149
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PARENT NO. JOANNION:
GENERAL INFORMATION:
APPLICANT: KINET, Jean-Pierre
APPLICANT: KINET, Jean-Pierre
APPLICANT: KINET, Jean-Pierre
TITLE OF INVENTION: ISOLATION, CHARACTERIZATION, AND USE OF
TITLE OF INVENTION: THE HUMAN B SUBUNIT OF THE HIGH AFFINITY RECEPTOR FOR
TITLE OF INVENTION: IMMUNOGLOBULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 22, Appli Patent No. 5770396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
                                     FEATURE:
                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 40
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)836-9300
                                                                                          FEATURE:
                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                246 atttctttcaggatatccattctggggctctgttttgttcattaattctggagccttcct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       135 aaaaatgaaaatcttagggactatccagatcctgtttggaattatgaccttttctttttgg 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        414 TGTTGTAGCAGGGATAAAACCCACAAGAAC 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           306 aattgcagtgaaaagaaaaccacagaaac 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   294 TGTCTTTCTGGGTTCCTTGCAATACCCATACCACTTCCAAAAGCACTTCTTTTTCTTCAC
 NAME/KEY:
                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          354 CTTCTACACAGGCTACCCGATTTGGGGTGCTGTTTTTTCTGTAGTTCAGGAACCTTGTC 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195 agt-----tatcttccttttcaccttgttaaaaccatatccaaggtttccctttat 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     234 AAAATTACAAGTTCTTGGGGCCATCCAGATCCTGAATGCAGCAATGATTCTGGCTTTGGG
                                                                                                                             TOPOLOGY: .
                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
les 116; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alexandria
                                                                                                                                          NUCLEIC ACID
EDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22313-0299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ٧A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/07869933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Foley & Lardner
1800 Diagonal Road,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                  CDS
46..786
sig_peptide
46..54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
97..738
                                                                                                                                                                                                                                                                                                                                                                                                 19920416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                US/07/869,933
                                                                                                                                                                                                                22:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                        40399/154 NIHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 46; DB 2;
Pred. No. 0.00074;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ·Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
```

```
SEQ ID NO 22
LENGTH: 2545
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: Sig_peptide
LOCATION: (46)...(54)
FEATURE:
NAME/KEY: CDS
LOCATION: (46)...(786)
US-09-103-663-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; FEATURE:
; NAME/KEY:
; LOCATION:
US-07-869-933-22
                                              밁
                                                                                δÃ
                                                                                                                           Дb
                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
US-09-103-663-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                       Query Match 9.9%;
Best Local Similarity 54.5%;
Matches 134; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 134; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Kinet et al. TITLE OF INVENTION: Isolation, characterization, and use of the TITLE OF INVENTION: subunit of the high affinity receptor for TITLE OF INVENTION: immunoglobulin E. FILE REFERENCE: 50490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EARLIER FILING DATE: 1992-04-16
NUMBER OF SEQ ID NOS: 35
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/103,663D CURRENT FILING DATE: 1998-06-23 EARLIER APPLICATION NUMBER: 07/869,933
                                                                                                                                                          101 caactcaaagccccttgcaaaaattatttgctagaaaatgaaaatcttagggactatcc 160
216 gttaaaaccatatccaaggtttcccttta-tatttctttcaggatatccattctggggct 274
                                                                                                                           188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     428 ATCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             335 ctctgg 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  308 CTTCAGACTTTGACGACGAAGTGCTTTTATTATATAGAGCAGGCTACCCATTCTGGGGTG 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         216 gttaaaaccatatccaaggtttcccttta-tatttctttcaggatatccattctggggct 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 248 AAGTTCTGGTTGGTTTGATATGCCTTTGTTTTGGAACAGTTGTCTGCTCCACACTCCAGA 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101 caactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggactatcc 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      368 CAGTGCTGTTTGTTTTGTCTGGATTTTTGTCAATTATGTCCGAAAGGAAAAACACACTGT 427
                                                               agatectgtttggaattatgaecttttettttggagttatetteetttteaecett----- 215
                                                                                                                      caccacagcagacatggcagtcatttttgaagaaagagttggagttcctgggcgtaaccc 247
                                          aagttctggtttggtttgatatgcctttgtttttggaacagttgtctgctccacactccaga 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctgttttgttcattaattctggagccttcctaattgcagtgaaaaagaaaaaccacagaaa 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agatcctgtttggaattatgaccttttcttttggagttatcttccttttcacctt---- 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCACAGCAGACATGGCAGTCATTTTTGAAGAAAGAGTTGGAGTTCCTGGGCGTAACCC 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22, Application US/09103663D o. 6171803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mat_peptide 55..786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9.9%;
                                                                                                                                                                                                       Score 44.4; DB 4;
Pred. No. 0.0024;
0; Mismatches: 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 44.4; DB 1
Pred. No. 0.0024;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2545;
                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                       6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human
                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ņ
```

```
밁
                               Ş
                                                                  밁
                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                    ; CLONE: pTZgpt-F1s
US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 5670367 GENERAL INFORMATION:
                                                                                                                                   Matches
                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 14,
                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 7218 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINA
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: EP 91 114 300.6 FILING DATE: 26-AUG-1991 ATTORNEY/AGENT INFORMATION: NAME: BENT, Stephen A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOETWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
REFERENCE/DOCKET NUMBER: 30 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                   IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368 cagtgctgtttgttttgtctggatttttgtcaattatgtccgaaaggaaaaacacactgt 427
                                                                                                                                y Match 9.2%; Score 41.6; DB 1; Local Similarity 4.2%; Pred. No. 0.02; nes 17; Conservative 214; Mismatches 173;
                               66 atatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaaaaatt 125
                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 22313-0299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 1800 Dia
CITY: Alexandria
                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Foley & Lardner STREET: 1800 Diagonal Road,
                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ctctgg 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atctgg 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ctgttttgttcattaattctggagccttcctaattgcagtgaaaaagaaaaaccacagaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cttcagactttgacgacgaagtgcttttattatatagagcaggctacccattctggggtg 367
                                                                                         ttcaagcaccgcacacgtccggtgtttctggtatttcctccagaaatcactgcttcaga 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4, Application US/08232463 5670367
                                                                                                                                                                                                                                                                                                    nucleic acid
                                                                                                                                                                                                                                                                                                                                                                         899149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٧A
                                                                                                                                                                                                                                                                                                                                                                                     : (703)836-9300
(703)683-4109
                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stephen A.
                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RECOMBINANT FOWLPOX VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/07/935,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                    29,768
                                                                                                                                                                                                                                                                                                                                                       14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _
=
=
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                        30472/114 IMMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 7218;
                                                                                                                                 Indels
                                                                                                                                0;
                                                                                                                                Gaps
                                                                                                                                 0;
```

```
밁
                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρy
                                                                                                                                                      ; TOPOLOGY: US-09-104-324B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-104-324B-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/09104324B Patent No. 6232460
                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                             TELEFAX: (212) 752-59 INFORMATION FOR SEQ ID NO:
3004 TTCTTTTAGTTTTTTTTTTCTATCCATTTTAGCAATTACAGCCCAACGGTCCTCCCGCAT 2945
                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                           NAME: Hanson, No. 6232460man D. REGISTRATION NUMBER: 30,946
REFERENCE/DOCKET NUMBER: LUD 54:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/892,702
FILING DATE: 15-July 1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: T reci, Ozlem; Sahin, Ugur; Pfreundschuh, Michael
TITLE OF INVENTION: Methods For Diagnosis And Treating Cancers,
TITLE OF INVENTION: And Methods For Identifying Pathogenic Markers-In A Sample
TITLE OF INVENTION: No. 6232460mal Cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                  186 ttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccctttat 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clii
STATE: No.
10103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186 ttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccctttat 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126 atttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatgacctt 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              306 aattgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattgatgacttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   246 atttctttcaggatatccattctggggctctgttttgttcattaattctggagccttcct 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/09/104,324B FILING DATE: 25-June-1998 CLASSIFICATION: 435
                                                                                                                                                                                     LENGTH: 3393 base pairs TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cagcattattgaattattcatttctctgcctttctcaattttgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90;
                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New York City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: Fulbright & Jaworski LLP
666 Fifth Avenue
                                                                                                                                                                                                                                                                              (212)
                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM
                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                (212)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Diskette,
                                                                                                                                                                                                                                                                              752-5958
                                                                                 7.7%;
                                                                                                                                                                                                                                                                                              318-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.5 inch,
                                                               ; Score 34.8; DE; Pred. No. 1.2; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                 LUD 5491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            144 kb
                                                                                                     DВ
                                                                 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            storage
                                                                                                 4;
                                                                                                 Length 3393;
                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               409
                                                                 0; Gaps
                                                                   0,
```

```
δÃ
                                                   В
                                                                               ş
                                                                                                               В
                                                                                                                                            Ş
                                                                                                                                                                                                                                                       TOPOLOGY: US-09-162-713-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-162-713-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                            Query Match
rocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/09162713 Patent No. 6239256
                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: T reci
                                            2944 TTTTCTTATAGCTCCAAACTTCAGTGTAGGTCCAGGGGTTGTTAGAGATGAAGGGGCCTT 2885
                                                                                                                 3004
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UMBER: 08/892,702
FILING DATE: 15-July-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: LUTELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
TITLE OF INVENTION:
306 aattgcagtgaaaagaaaaccacagaaactctgggaattttgattacattgatgacttt 365
                                                                         246 atttctttcaggatatccattctggggctctgttttgttcattaattctggagccttcct 305
                                                                                                                             186 ttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccctttat 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2824 CA 2823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2944 TTTTCTTATAGCTCCAAACTTCAGTGTAGGTCCAGGGGTTGTTAGAGATGAAGGGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2884 TTTTGGTGTTTTGACACAAAGATGAGAAGCTGGTGGATTATTGTTCCTATACAGTGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               366 ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       246
                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Hanson, No. 6239256man REGISTRATION NUMBER: 30,946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/162,713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                         TTCTTTTAGTTTTTTTTTTTTCTATCCATTTTAGCAATTACAGCCCAACGGTCCTCCCGCAT 2945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aattgcagtgaaaagaaaccacagaaactctgggaattttgattacattgatgacttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             atttctttcaggatatccattctggggctctgttttgttcattaattctggagccttcct 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               367
                                                                                                                                                                                                                                                                                  nucleic acid
EDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New York City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New York
                                                                                                                                                                                                                                                                                                              3393 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: Felfe & Lynch
805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T reci, Ozlem; Sahin, Ugur; Pfreundschuh, Michael
VENTION: Methods For Diagnosis And Treating
VENTION: Cancers, And Methods For Identifying Pathogenic Markers
                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                (212)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM
                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                            (212)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Diskette, 3.5 inch, 144 kb storage
                                                                                                                                                                                                                                                                                                                                                              838-3884
                                                                                                                                                                                       7.78;
                                                                                                                                                                                                                                                                                                                                                                            688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sample Of No. 6239256mal Cells
                                                                                                                                                                       Score 34.8; D
Pred. No. 1.2;
0; Mismatches
                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                         LUD 5491
                                                                                                                                                                                                                                                                                                                                                                                                                                      D
                                                                                                                                                                                       .
2:
                                                                                                                                                                                                     DB 4;
                                                                                                                                                                          92;
                                                                                                                                                                                                     Length 3393;
                                                                                                                                                                       Indels
                                                                                                                                                                       0;
                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2885
                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        In
              Qγ
                                            B
                                                                         Qy
                                                                                                       B
                                                                                                                                                                                                                                             ; NAME/KEY:
; LOCATION:
US-08-568-147B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-568-147B-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                     Matches
                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL
                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2824 CA 2823
                                                                          161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                366 ca 367
                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
TOPOLOGY: lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTTGGTGTTTTGACACAAAGATGAGAAGCTGGTGGATTATTGTTCCTATACAGTGTTTT 2825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1,
                                                                                                                                                                     99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11530
```

```
TELEFAX: 516-742-4366
TELEX: 230 901 SANS U
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 516-742-4343
TELEFAX: 516-742-4366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Diciglio, Frank S.
NAME: Diciglio, Frank S.
NAME: Diciglio, Frank S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Sekigucni, Applicant: Takeda, Katsumichi
APPLICANT: Takeda, Katsumichi
APPLICANT: TORRAMENT CODING FOR SQUAMOUS CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 800,
FILING DATE: 02-DEC-199.
                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/568,147B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
221 aaccatatccaaggittccctttatatttctttcaggatatccattctggggctctgitt 280
                                                                                                                             425 CATCTAAATATTCCTGTAAAAATAGATACGTTTTTTCTCCGAAGAGCTTGTTGGCGATCT 366
                                                                                                                                                    101 caactcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggactatcc 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 31
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Scully, Scott, Murphy & Presser STREET: 400 Garden City Plaza CITY: Garden City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM:
                                                                                       agatcctgtttggaattatgaccttttcttttggagttatcttcctttttcaccttgttaa 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Application US/08568147B
5783422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                1711 base pairs
                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                   CDS
62..1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kato, Hiroshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Suminami, Yoshinori
                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
                                                                                                                                                                                                                                                                                                                                                                            cDNA to mRNA
                                                                                                                                                                                                                          7.5%;
47.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARCINOMA-ASSOCIATED ANTIGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , 952
                                                                                                                                                                                                       Score 33.6; D
Pred. No. 2;
0; Mismatches
                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8425
                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                         109;
                                                                                                                                                                                                                                           Length 1711;
                                                                                                                                                                                                         Indels
                                                                                                                                                                                                       0
                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                       0,
```

밁

305 GAACATTTCCTGACCTATCAACATGATATGTTGCAGCTTTTCCTGTGGTGTTCTCTGTGA 246

```
QY
₽
                                                                                                                                 TOPOLOGY: US-08-179-557-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-179-557-14/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 14, Application US/08179557 Patent No. 5837509
                                                           Matches
                                                                                       Query Match
                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1185 base pairs
                                                                                                                                                                                                                                                     NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 303/
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202 672 5300
TELEFAX: 202 672 5399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/I
FILING DATE: 03-JAN-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: DK 0988/93
FILING DATE: 01-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/179,557
FILING DATE: 07-JAN-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DK 1579/92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                            FILING DATE: 25-MAR-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
421
               284 tcattaattctggagccttcctaattgcagtgaaaagaaaaccacagaaactctgggaa 343
                                                                                                                                                                                                                               TELEFAX: 20136
                                                                                                                                                                                                                                                   TELEPHONE: 202 f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              245 CTTGATCAAAGTGAAGAACCTTCTTAAT 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          281 tgttcattaattctggagccttcctaat 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: JULY
CTTY: Washington,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC OPERATING SYSTEM:
                                                                         Local
                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
TAATGAGTTTAACCGGCATCATCATTGGAATTAAAATTCCAAGTGCAGTAAGCATCGCAG 362
                                                           l Similarity
67; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20007-5109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Foley & Lardner 3000 K Street, N.W. ashington, D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VRANG, Astrid
                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MADSEN, Soeren Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BECH HANSEN, Egon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NILSSON, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOHANSEN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ISRAELSEN, Hans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-DEC-1992
                                                                      7.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Same
39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant Lactic Acid Bacterium
Containing an Inserted Promoter and Method of Constructing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eric
                                                                                                                                                                                                                                                                                                                                                                                                                      PCT/DK94/00004
                                                                                                                                                                                                                                                                                                                                                                          US 08/036,681
                                                                                                                                                                                                                                                                                                                29,768
                                                         Pred. No. 2;
0; Mismatches
                                                                                                                                                                                                                                                                                                    30307/140/PLVI
                                                                                       DB
                                                           56;
                                                                                    2;
                                                                                     Length 1185;
                                                         Indels
                                                         0;
                                                         Gaps
                                                         0
                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                             В
                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                             γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                          APPLICANT:
APPLICANT:
              APPLICANT:
```

```
US-08-800-929A-5/c
                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; NAME/KEY: variation
; LOCATION: (3677)...(3951)
; OTHER INFORMATION: n can be any nucleotide
US-09-212-971-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
US-09-212-971-5/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
Sequence 5, Application US/08800929A
PATENT NO. 6133437
GENERAL INFORMATION:
APPLICANT: Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 17

SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 5
LENGTH: 6669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 5, Application US/09212971B Patent No. 6107041
                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EARLIER APPLICATION NUMBER: 60/017,354
EARLIER FILING DATE: 1996-04-26
EARLIER APPLICATION NUMBER: 60/030,590
EARLIER FILING DATE: 1996-11-14
EARLIER APPLICATION NUMBER: 08/800,929
EARLIER FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: DETECTION AND MODULATION OF IAPS AND TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/009002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Tsang, Benjamin K APPLICANT: Pratt, Christine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baird,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: MacKenzie, Alexander E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Korneluk, Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                       | |||| | |
2826 ATGTTTCTGAA 2816
                                                                                                                                                                                                                                                                                                                                          2946 TGGCTGTAAAATAAGACCTTTCAAAGATTTTAAATTTTTTGTCCCCCTCAAAGAACTAAC 2887
                                                                                                                                                                                                                                                         2886 ATTGTAGAGTTATTCAACTTATCACCTCCTGAAAACATTTTTTGAACTTTTTGTTTTTCTAA 2827
                                                                                                                                                                                                                                                                                        188 cttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccctttatat 247
                                                                                                                                                                                                                                                                                                                                                                     248 ttctttcagga 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301 TAT 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404 ttt 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361 CAATAATCAGATTTCTGACTTTTTGCCTTTTTTGTTTGAGTCATTTGAGTTTCCTTTTCTT 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              344 ttttgattacattgatgactttcagcattattgaattattcatttctctgcctttctcaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/
FILING DATE: 1998-12-16
                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 70; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Liston, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                7.48;
53.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/09/212,971B
                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 33.4;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                              61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 6669;
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OF PROLIFERATIVE
                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403
```

0;

MacKenzie, Alexander Liston, Peter Baird, Stephen

Tsang,

```
Q
                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                      Дδ
                                                                                                                                                                                                                                                 B
                                                                                                                                                                           US-09-617-053A-5/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-800-929A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 7.4%;
Best Local Similarity 53.4%;
Matches 70; Conservative
                                                                                                                        GENERAL INFORMATION:
                                                                                                                                       Sequence 5, Application US/09617053A Patent No. 6300492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 26-APR-1996
ATTORNEY/AGENT INFORMATION:
NAME: Bicker-Brady, Kristina
REGISTRATION NUMBER: 07891
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-428-7045
TELEPAX: 617-428-7045
                                                                                       APPLICANT:
                                                                                                      APPLICANT: Korneluk,
                                    APPLICANT:
                                                    APPLICANT:
                                                                     APPLICANT:
   TITLE OF INVENTION:
                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Pratt, Ch
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 02110
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 6669 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM Compatibl
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for V
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                  2946 TGGCTGTAAAATAAGACCTTTCAAAGATTTTAAATTTTTTGTCCCCCTCAAAGAACTAAC 2887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/030,590
FILING DATE: 14-NOV-1996
APPLICATION NUMBER: 60/017,354
                                                                                                                                                                                                                                                 2826 ATGTTTCTGAA 2816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                      248 ttctttcagga 258
                                                                                                                                                                                                                                                                                                                                               188 cttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccctttatat 247
                                                                                                                                                                                                                                                                                                                                                                                                          128 ttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatgacctttt 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: Sir
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/800,929A FILING DATE: 13-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Æ
                Tsang, Benjamin K
Pratt, Christine
                                                   Baird, Stephen
                                                                 Liston, Peter
                                                                                     MacKenzie, Alexander
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              176 Federal Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clark & Elbing LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
DETECTION AND MODULATION OF TAPS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Christine
Christine
Christine
Christine
Christine
Christine
Christine
Christine
Christine
Christine
Christine
Christine
Christine
Christine
Christine
                                                                                                    Robert G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07891/009001
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 33.4;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ed. No. 3.6;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        61; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 6669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
В
                                                                                                                                                                                                                                                                                                                NAME/KEY: variation
; LOCATION: (3677)...(3951)
; OTHER INFORMATION: n can be any nucleotide US-09-617-053A-5
     В
                                     δ
                                                                                                               Q
                                                                                                                                                      밁
                                                                                                                                                                                     γQ
                                                                                                                                                                                                                        Query Match 7.4
Best Local Similarity 53.4
Matches 70; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: NAIP FOR THE DIAGNOSIS AND TREATMENT OF PROLIFERATIVE TITLE OF INVENTION: DISEASE FILE REFERENCE: 07891/09903 CURRENT APPLICATION NUMBER: US/09/617,053A CURRENT FILING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 08/800,929 PRIOR FILING DATE: 1997-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 6669
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                  2826 ATGTTTCTGAA 2816
                                                                            2886 ATTGTAGAGTTATTCAACTTATCACCTCCTGAAAACATTTTTGAACTTTTTGTTTTTCTAA 2827
                                                                                                         188 cttttggågttatcttccttttcaccttgttaaaaccatatccaaggtttccctttatat 247
                                                                                                                                                                         128 ttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatgacctttt 187
                         248 ttctttcagga
                                       258
                                                                                                                                                                                                                                            7.48;
                                                                                                                                                                                                                        Score 33.4; DB 4;
Pred. No. 3.6;
0; Mismatches 61;
                                                                                                                                                                                                                            61;
                                                                                                                                                                                                                                                             Length 6669;
                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                            0
```

Search completed: November 29, 2001, 00:20:23 Job time: 9655 sec

THIS PAGE BLANK (USPTO)

```
Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                  Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maximum
             0000 000
                                                                                                        c c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inimum DB
aximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ptal number of hits satisfying chosen parameters:
                                                                                                                                        ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  on:
                                                                                                                                                                                          Pred. No. is the nu score greater than and is derived by a
                                                      370
348
347.4
215.4
214.8
197.2
157.8
                                                                                                                                        Score
                                            145.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq
                                                                                                                                                                                         No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length: 0
length: 2000000000
                                                                                                                                       Query
Match
  82.2
77.3
77.2
47.9
47.7
43.8
35.1
32.4
25.1
25.1
                                                                                                                                                                                                                                     11:
12:
13:
14:
15:
16:
16:
17:
19:
20:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11351937 seqs, 5372889281 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                November 28, 2001, 21:34:03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-735-712-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version Copyright (c) 1993 - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atggattcaagcaccgcaca.....attgtgaacaatgttgttga
                                                                                                                                                                                                                                                                                                                                                                                                em_estom:*
em_estpl:*
em_estba:*
                                                                                                                                                                                                                                                                                      em_gss_fun:*
em_gss_hum:*
em_gss_inv:*
                                                                                                                                                                                                                                                                                                                                                                   em_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                         em_esthum:
                                                                                                                                                                                                                                                                                                                                                                          em_estov:*
                                                                                                                                                                                                                                                                                                                                                                                      em_estro:*
                                                                                                                                                                                                                                                                                                                                                                                                                               em_estin:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_estfun:*
                                                                                                                                                                                                                                                        em_gss_pro:*
em_gss_rod:*
                                                                                                                                                                                                                                     em_gss_other:*
                                                                                                                                                                                                                                              em_gss_vrt:*
                                                                                                                                                                                                                                                                                                                       gb_gss:*
                                                                                                                                                                                                                                                                                                                                          gb_est2:*
                                                                                                                                                                                                                                                                                                                                                      gb_est1:*
                                                                                                                                                                                                                                                                             em_gss_pln:*
                                                                                                                                                                                                                                                                                                                                 gb_htc:*
                                                                                                                                        Length
   389
516
508
482
281
415
415
418
382
387
387
                                                                                                                                        DΒ
   10
10
10
10
10
10
                                                                                                                                        IJ
 AA411806
AA781801
AA7361801
AA736089
AI149899
AI002083
AA700599
BE107659
BE107659
BE638325
AA43988
AA416972
AQ108532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   summaries
                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search time 1970.99 Seconds (without alignments) 2453.387 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22703874
AA411806 zt67a03.s
AA781801 ai58g01.s,
AA436088 zu03a08.r
AI149899 gf43h06.x
AI102083 ot38b02.s
AA70059 zt04h05.r
BE107659 UI-R-BT1-
BE638325 EST00022
AA435988 zu03a08.s
AA416972 zt04h05.s
AA416972 zt04h05.s
                                                                                                                                 Description
```

			ი				ဂ			O	ი	C	ი	Ω	ဂ			ი			ი							C			ဂ	O
45	44	43	42	41	40	39	38	37	36	<u>3</u> 5	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13
43		43.4	w	w	44	4	44.8	45.6	46	46.4	7	7	7	48.2	49	52.4	53.2	55.6	57	57.2	58	65.2	66.8	66.8	66.8	66.8	66.8	68.4	69.8	70.6	83	94.6
9.6	٠	9.6	•				•	•			•		•	•				12.4	12.7	12.7	12.9	14.5	14.8	14.8	14.8	14.8	14.8	15.2	15.5	15.7	18.4	21.0
816	1101	1101	888	647	1101	899	1001	1101	887	944	332	557	1007	1101	470	344	715	601	899	689	494	562	1071	793	704	517	508	534	857	421	218	394
11	13	13	13	13	13	10	13	13	10	13	11	13	13	13	10	11	11	10	11	11	11	10	10	11	11	11	10	11	11	13	10	10
BG495708	CNS016HF	CNS0039L	CNS017OM	B10659	CNS0039G	AL514901	CNS01400	CNS000B8	AL531049	CNS06WVA	BF319786	AQ580877	CNS06X9S	CNS0182P	AI807884	BE861164	BG538851	BE638317	BG720623	BG719295	BF475316	AA418443	AL544561	BG484817	BG571626	BG664654	AA234138	BF591089	BG720182	B86842	E638	AA758635
BG495708 602540318	_		Drosoph	\mathbf{r}	Drosoph		AL103554 Drosophil	AL063632 Drosophil	AL5310	AL418940 T3 end of			AL419462 T3 end of	AL108811 Drosophil	AI807884 wf43gl1.x	BE861164 UI-M-AMO-		BE638317 EST00003	BG720623 602691889	BG719295 602690369	BF475316 7r07h06.x	AA418443 zv92e05.r	AL544561 AL544561	BG484817 602505511			AA234138 zr51b06.r	7h52g02.	6026922	RPCI11-26F	EST00013	AA758635 ah67b04.s

ALIGNMENTS

ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM REFERENCE AUTHORS COMMENT FEATURES DEFINITION LOCUS AA411806/c RESULT TITLE JOURNAL source The immunity of the control of the c EST. AA411806 410 bp mRNA EST 12-AUG-1997 zt67a03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:727372 3. similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20; AA411806 AA411806.1 GI:2070377 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Homo sapiens mRNA sequence. numan. /organism="Homo sapiens" /db_xref="GDB:5924284"

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                    RESULT 2
AA781801/c
                            COMMENT
                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                   KEYWORDS
                                                                                                                                                                 VERSION
                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 370
                                      JOURNAL
                                                               TITLE
                                                                                                                                                                                                                                                                                                            441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  410
                                                                                                                                                                                                                                                                                                                                    110
                                                                                                                                                                                                                                                                                                                                                             381
                                                                                                                                                                                                                                                                                                                                                                                     170
                                                                                                                                                                                                                                                                                                                                                                                                                                                           261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          141
                                                                                                                                                                                                                                                                                                                                                                                                            321
                                                                                                                                                                                                                                                                                                                                                                                                                                   230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                  atgttgttga 450
                                                                                                                                                                                                                                                                                                                                                                                              aaaaaccacagaaactctgggaattttgattacattgatgactttcagcattattgaatt
                                                                                                                                                                                                                                                                                                                                                                                                                                             tccattctggggctctgttttgttcattaattctggagccttcctaattgcagtgaaaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATGACCTTTTCTTTTGGAGTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gaaaatcttagggactatccagatcctgtttggaattatgaccttttctttttggagttat
                                                                                                                                                                                                                                                                                      ATGTTGTTGA 41
                                                                                                                                                                                                                                                                                                                                                                                  AAAAACCACAGAAACTCTGGGAATTTTGATTACATTGATGACTTTCAGCATTATTGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCATTCTGGGGCTCTGTTTGTTCATTAATTCTGGAGCCTTCCTAATTGCAGTGAAAAG
                                                                                                                                                                                                 ai58g01.sl
similar to
                                                                                                                                                                          sequence.
          Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
                                                         NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy
                                                                                    Mammalia; Eutheria; Primates; 1 (bases 1 to 389)
                                                                                                                                                   EST
 cDNA Library Preparation:
                                                                                                            Eukaryota; Metazoa; Chordata;
                                                                                                                         Homo sapiens
                                                                                                                                                              AA781801.1
                                                                                                                                                                                                                           AA781801
                                                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82.2%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:9606"
/clone="IMAGE:727372"
/clone_lib="Soares_testis_NHT"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lab_host="DH10B"
                                                                                                                                                                                               389 bp mRNA EST 31-
Soares_testis_NHT Homo sapiens cDNA clone
SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN
                                                                                                                                                              GI:2841132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 370; DB 10; ; Pred. No. 3.6e-73; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pT7T3D-Pac (Pharmacia) with a modified
M. Bento Soares, Ph.D.,
                                                                                                 Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                                  Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                            Project (CGAP),
                                                                                                                                                                                               31-DEC-1998
one 1375056 3
 M. Fatima Bonaldo
                                                                                                             Euteleostomi;
                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                  111
                                                                                                                                                                                                                                                                                                                                                                                                           380
                                                                                                                                                                                                                                                                                                                                                                                                                                                         320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       200
                                                                                                                                                                                                                                                                                                                                                                                                                                  171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                291
                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                             ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

멍 QY Вþ Qy 밁 20 В Qγ Бр δÃ 멍 Ş

Locus

```
ACCESSION
VERSION
                                                                                                                                       RESULT
AA436088
                                                                                                                                                                                                                δã
                                                                                                                                                                                           DЪ
                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                    SOURCE
                                                 KEYWORDS
                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE
                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 348; Conserv
                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                          149
                                                                                                                                                                                                                 403
                                                                                                                                                                                                                                                                343
                                                                                                                                                                                                                                                                                          209
                                                                                                                                                                                                                                                                                                                 283
                                                                                                                                                                                                                                                                                                                                          269
                                                                                                                                                                                                                                                                                                                                                                 223
                                                                                                                                                                                                                                                                                                                                                                                         329
                                                                                                                                                                                                                                                                                                                                                                                                                 163
                                                                                                                                                                                                                                                                                                                                                                                                                                         389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 103
                                                                                                                                                                                         89
                                                                                                                                                                                                                                       attttggggtgccactcagaggattgtgattgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                                                    ccatatccaaggtttccctttatatttctttcaggatatccattctgggggctctgttttg 282
                                                                                                                                                                                                                                                                                                                                                                                                   atcctgtttggaattatgaccttttcttttggagttatcttcccttttcaccttgttaaaa 222
                                                                                                                                                                                        ATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTTGTTGA 42
                                                                                                                                                                                                                                                                                                                                       CCATATCCAAGGTTTCCCTTTATATTTCTTTCAGGATATCCATTCTGGGGCTCTGTTTTG 210
                                                                                                                                                                                                                                                                                                                                                                                       ATCCTGTTTGGAATTATGACCTTTTCTTTTGGAGTTATCTTCCTTTTCACCTTGTTAAAA 270
                                                                                                 AA436088
-zu03a08.rl
5' similar
                                                             AA436088
AA436088.1
 Eukaryota; Metazoa;
Mammalia; Eutheria;
                       Homo sapiens
                                     human
                                                 EST
                                                                                     mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seq primer: -40m13 fwd. ET from Amersham
High quality sequence stop: 311.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Clone distribution CLI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ilarity 100.0%;
Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="1375056"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="male"
                                                                                                516 bp mRNA EST 09-NOV-199; SOARES_testis_NHT HOMO SAPIENS CDNA clone IMAGE:77 to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20
                                                              GI:2141002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.3%;
 Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 348; DB 10;
; Pred. No. 3.1e-68;
0; Mismatches 0;
Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequencing Center information can b
                                                                                                                          09-NOV-1997
                                                                                                              IMAGE: 730742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 þe
```

V,

```
밁
                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                 망
                                                  Db
                                                                            οy
                                                                                                       В
                                                                                                                            Q
                                                                                                                                                         В
                                                                                                                                                                                  Ş
                                                                                                                                                                                                              밁
                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
412
                          361
                                                     352
                                                                            301
                                                                                                       292
                                                                                                                               241
                                                                                                                                                           232
                                                                                                                                                                                     181
                                                                                                                                                                                                                172
                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                   112
                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                       52
                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                   ttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc
                                                                                                                                                                         accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc
                                                                                                                                                                                                                            aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg 180
                                                                                                                                                                                                                                                                  TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCCTTGCAA
                                                                                                                                                                                                                                                                                 tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                                                                                                                                                                                                                                                                                      ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 111
                                                                                                                                                                                                                                                                                                                                    acttt 365
                                                                           ttcctaattgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattgatg
                                                                                                                                                         ACCTTTTCTTTTGGAGTTATCTTCCTTTTCACTTTGTTAAAACCATATCCAAGGTTTCCC
                                                                                                                                                                                                                AAATTATTTGCTAGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATG
                                                   TTTATATTTCTTTCAGGATATCCATTCTGGGGCTCTGTTTTGTTCATTAATTCTGGAGCC
                                                                                                                                                                                                                                                                                                                                                                           354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 733 Std Error: 0.00
Seq primer: -28ml3 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           White,Y., Wylie,T., WaterstowashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 482.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                          149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                          а
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="GDB:5927437"
/db_xref="taxon:9606"
/clone="IMAGE:730742"
/clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                         77.2%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                         Score 347.4; DB 10; Pred. No. 4.1e-68;
                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                           11;
                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ö
                                                                                                                                                                                                                                                                                                                                                                                                    516;
                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                               300
                                                                                                                                                                                                                                                                  171
                                                                            360
                                                                                                                                                         291
                                                                                                                                                                                                             231
                                                                                                       351
                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
AI149899/c
                       Qy
                                                  DЬ
                                                                          δÃ
                                                                                                     В
                                                                                                                            Qγ
                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                            BASE
                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /ERSION
                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                            COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                    448
328
                         313
                                                   388
                                                                            253
                                                                                                                               193
                                                                                                                                                                                     133
            GTGAAAAGAAAACCACAGAAACTCTGATAATATTGAGCCGAATAATGAATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AI149899.1 GI:3678368 EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
AI149899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:1752827"
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                         47.98;
                                                                                                                                                                                                              0
                                                                                                                                                                                                                        Score 215.4; DB 1
Pred. No. 1.6e-38;
                                                                                                                                                                                                                Mismatches
```

```
ggagttatcttccttttcaccttgttaaaaccatatccaaggtttccctttatatttctt 252
                                                                                                           agaaaaatgaaaatcttagggactatccagatcctgtttggaattatgaccttttctttt 192
                                                                                      AGAAAAATGAAAATCTTAGGGACTATCCAGATCCTGTTTGGAATTATGACCTTTTTCTTTT 449
GGAGTTATCTTCCTTTTCACTTTGTTAAAACCATATCCAAGGTTTCCCTTTATATTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 742 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AI149899 508 bp mRNA EST 10-NOV-1998 qf43h06.xl Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1752: 3' similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20 ;,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
National Cancer Institute, Cancer Genome Anat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhin1; Hominidae; Homo. 1 (bases 1 to 508)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA Library Preparation: M. Bento Soares, Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ert Length: 742 Std Error: 0.00
primer: -40m13 fwd. ET from Amersham
h quality sequence stop: 455.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                           DB 10;
                                                                                                                                                                                 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anatomy Project (CGAP),
                                                                                                                                                                                 Indels
                                                                                                                                                                                                                       Length 508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       M. Fatima Bonaldo
                                                                                                                                                                                 0;
                                                                                                                                                                                 Gaps
389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :1752827
                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              be
```

```
REFERENCE
AUTHORS
8
                               Вb
                                                              δÃ
                                                                                               밁
                                                                                                                            Qy
                                                                                                                                                               Вþ
                                                                                                                                                                                          Ş
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AI002083/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Snoor
                                                                                                                                                                                                                                                                                                                                                                           SE COUNT
                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                  330
                                                                                                                                                               390
                                                                                                                                                                                                                              450
     241
                                                                                                                               121
                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                          1 atggattcaagcaccgcacacagtccggtgtttcttggtatttcctccagaaatcactgct 60
                                                                                                                                                           tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                                                             aaattatttgctagaaaaatgaaaatcttagggactatccagatcctgtttggaattatg 180
tttatatttctttcaggatatccattctggggctctgttttgttcattaattctggagcc 300
                               TCATTAATTCTGGAGCCTTCCTAATTGCAGTGAAAAGAAAAACCACAGAAAACTCTGATCA 211
                                                              accttttcttttggagttatcttccttttcaccttgttaaaaccatatccaaggtttccc 240
                                                                                                                                                                                                                         ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 391
                                                                                                                                                                                                                                                                                            318;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 598 Std Error: 0.00
Seg primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 393.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 482)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AI002083 482 bp mRNA ESCOT38b07.S1 Soares testis_NHT Homo sapiens 3', mRNA sequence.
AI002083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA Sequencing by: Washington University Genome Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA Library Preparation: M. Bento Soares, Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AI002083.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA Library Arrayed by: Greg Lennon, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                          157
                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:1619019"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                          47.78;
70.78;
                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                          Score 214.8; DB 1
Pred. No. 2.2e-38;
                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                         DB 10;
                                                                                                                                                                                                                                                                                         97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cDNA clone IMAGE:1619019
                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                       Length 482;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequencing Center information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-AUG-1998
                                                                                                                                                                                                                                                                                         35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fatima Bonaldo
                                                                                                                                                                                                                                                                                       Gaps
                                                                                               271
                                                                                                                                                                                                                                                                                         1;
```

δÃ

249 totttcaggatatccattctggggctctgttttgttcattaattctggagccttcctaat 308

Query Match
Best Local Similarity 98.5
Conservative

43.8%;

Score 197.2; DB 1 Pred. No. 2.1e-34; Mismatches

DB 10;

281; 0,

Indels

Gaps

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 6
AA707529/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          210 AAACTACATTTGTGGTTATTCTCACCAAAATAGTCAGTGTAAGGCTGTTACTGTCCTGTT 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65 GAGGATTGTGATTGTGAACAATGTTGTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gaggattgtgattgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ttcctaattgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattgatg 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Cancer Institute, Cancer Tumor Gene Index Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
AA707529
AA707529.1 GI:2717447
                                                                                                                                                                                                                                                                                                                                     Insert Length: 456 Std Error: 0.00 Seq primer: -40m13 fwd. ET from Amersham High quality sequence stop: 218.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA707529 281 bp mRNA ah41a12.s1 Soares_testis_NHT
                                                                                                                                                                                                                                                                                                                                                                                     found through the I.M.A.G.E. Consortium/LLNL
www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA Library Preparation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                         Ph.D.

cDNA Library Arrayed by: Greg Lennon, Ph.D.

cDNA Sequencing by: Washington University Genome

Clone distribution: NCI-CGAP clone distribution

Clone distribution: NCI-CGAP clone distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 numan
                 94
        /lab_host="DH108"
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was prepared from mRNA obtained from Clontech Laboratories
                                                                                                                                                                                                                                                      /clone="1292062"
                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                  /sex="male"
                                                                                                                                                                                                                                  /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M. Bento Soares,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                         information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fatima Bonaldo
                                                                               the Not I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ų
,
                                               was
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
AA470059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CESSION
ERSION
              Query Match
Best Local Similarity
Matches 159; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGATTGTGAACAATGTTGTTGA 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tgattgtgaacaatgttgttga 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattgatgactttcag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTTAGGGGATATCCATTCTGGGGGCTCTGTTTTGTTCATTAATTCTGGAGCCTTCCTAAT 178
                                                                                                                                                                                                                                                                                                                                                 Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further i
Insert Length: 656 Std Error: 0.00
Seq primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 393.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA470059 415 bp mRNA EST 09-NOV-1997 zt94h05.rl Soares_testis_NHT Homo sapiens cDNA clone IMAGE:73 5' similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  White,Y., Wylie,T., Watersto
WashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 415)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
AA470059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA470059.1
                                                                                              129
                                                                                                                                                                                                                                                                                                                                                                                                                                                  314 286 1800
314 286 1810
               Conservative
                                                                                             ۵
                                                                                         /organism="Homo sapiens"
/db_xref="GDB:5926570"
/db_xref="taxon:9606"
/clone="IMAGE:730041"
/clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                        /sex="male"
                                                                                                                                                                                                                                            /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:2197368
                          35.1%;
98.8%;
              0,
           Score 157.8; DB 10; Pred. No. 1.3e-25; 0; Mismatches 2;
              Indels
                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63108
                                        415;
                                                                                                                                                                                                                                                                                                                                                                                                                       contact the
            0;
              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       730041
            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
BE107659/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     discovery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97044477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus.
              165
```

```
aaattatttgctagaaaaatgaaaaatcttagggactatcca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tcagaatatgagtccacagaactttcagccacgaccttttcaactcaaagccccttgcaa 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    atggattcaagcaccgcacacagtccggtgtttctggtatttcctccagaaatcactgct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAATTATTTGCTAGAAAAATGAAAATCTTAGGGGATATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAGAATATGAGTCCACAGAACTTTCAGCCACGACCTTTTCAACTCAAAGCCCCCTTGCAA 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGATTCAAGCACCGCACACAGTCCGGTGTTTCTGGTATTTCCTCCAGAAATCACTGCT 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: msoares@blue.weeg.uiowa.edu
The sequence contained an oligo-dT track that was present in the
oligonucleotide that was used to prime the synthesis of first
strand cDNA and therefore this may represent a bonafide poly A
tail. The sequence tag present in the cDNA between the NotI site
and the oligo-dT track served to identify it as a clone from the
normalized testis library cDNA Library Preparation: M.B. Soares Lab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            451 Eckstein Medical Research Building Towa City, Tel: 319 335 8250
Fax: 319 335 9565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clone distribution: clones will be available through Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 484)
Bonaldo, M.F., Lenno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Norway rat.
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UI-R-BT1-ame-d-04-0-UI.sl UI-R-BT1 Rattus norvegicus cDNA clone UI-R-BT1-ame-d-04-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genetics (www.resgen.com)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                University of Iowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Program for Rat Gene Discovery and Mapping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Soares,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genome Res. 6 (9), 791-806 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Normalization and subtraction: two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     primer: M13
                                                                                                                                                                                      'dev_stage="adult"
/lab_host="PHIOB (Life Technologies)"
/lab_host="PHIOB (Life Technologies)"
/lab_host="Nettor: p773D-Pac (Pharmacia) with a modified
/note="Vector: p773D-Pac (Pharmacia) with a mixture of
polylinker; Site_1: Not I; Site_2: Eco RI; The library
UI-R-BT1 is a subtracted library derived from a mixture of
the following tissues: hippocampus, thalamus, mid-brain,
medulla, corpus striatum, cerebral cortex and testis. For
a detailed description of the library from which this
clone was derived, please visit our web site at
ratest.eng.uiowa.edu. The subtraction has been previously
                        TAG_TISSUE~testis
TAG_SEQ=ACGCAG"
                                                                                                                           described in (Bonaldo, 6:791-806, 1996)
                                                                                                TAG_LIB=UI-R-BT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Rattus norvegicus"
/strain="Sprague-Dawley"
/db_xref="taxon:10116"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="UI-R-BT1-ame-d-04-0-UI"
/clone_lib="UI-R-BT1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:8499769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lennon, G. and Soares, M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Forward
125
                                                                                                                                                                 Lennon and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          approaches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                 Soares,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             facilitate gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IA 52242, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-JUN-2000
                                                                                                                                                                 Genome
```

```
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
BE638325/c
LOCUS
                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρy
                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 168
                                                                               Query Match
Best Local
                                                                Matches 155;
                                                                                                                                                                                                                                                                                                                                                                                          ATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341 gaattttgattacattgatgacttt 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 484 AGATCCTGTTTGGAATCATGAACTTCTCATTTGGAGTTGTTTCCCCTTTTCACCTTGGTAA 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161
                                  25
                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                ccggtgtttctggtatttcctccagaaatcactgcttcagaatatgagtccacagaactt 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tgttcattaattctggagccttcctaattgcagtgaaaagaaaaaccacagaaactctgg 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agalcctgtttggaaftatgaccttttcttttggagftatcttccttttcaccttgttaa 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aaccatatccaaggtttccctttatatttctttcaggatatccattctggggctctgttt 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAAAAATGAGCCAGGCGATGAATTT 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCCATACCCAAGGTTCCCCTTTTATATTTCTCTCAGGATATCCTTTCTGGGGCTCTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTCATTAACTCTGGGACCTTTCTGATTGCTCTGAAAAGAAAAACTACAGACACTCTGA 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  168;
                                                                                                                                                                                                                                                                                                                                                                                 Seq primer: T7 Promoter Primer
High quality sequence stop: 22
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 28-AUG-2000 EST00022 mouse testis apoptosis subtraction cDNA library Mus musculus cDNA clone MTA22 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Department of Pharmacology
Hunan Medical University
88 Xiangya road, Changsha, Hunan 410078, China
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: lj12@public.cs.hn.cn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Jiang H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Expressed sequence tags from mouse testis apoptosis subtraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 224)
Jiang, H., Li, L. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE638325.1 GI:9932068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       086-0731-4805036
086-0731-4497661
                                                                Conservative
                                                                                                                                                               58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                      /strain="C57BL"
/db_xref="taxon:10090"
/clone="MTA22"
                                                                                                                                                            /note="Vector: pUCm-T"
40 c 61 g
                                                                                                                                                                                                         /cell_type="spermatogenesis cells"
/dev_stage="adult"
                                                                                                                                                                                             /lab_host="JM109"
                                                                                                                                                                                                                                         /tissue_type="testis"
                                                                                                                                                                                                                                                           /sex="male"
                                                                                                                                                                                                                                                                            Library
                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                         'clone_lib="mouse testis apoptosis subtraction cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32.4%;
                                                                              28.0%;
76.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Lu,G
                                                             Score 126.2; DB 1
Pred. No. 1.8e-18;
D; Mismatches 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 145.8; DB 10;
Pred. No. 6.3e-23;
0; Mismatches 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                              65
                                                                                              DB 10;
                                                               48;
                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       365
                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
AA435988/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            204 CCCTTGTTCCTGGTGTTCCCTCCAGAGGTCACCACTCAAGAATACCAAACAACAGAACTT 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTTTCACCTTGGTAAACCCATA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cttttcaccttgttaaaaccata 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     atcttagggactatccagatcctgtttggaattatgaccttttctttttggagttatcttc 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAGCCACAGCCTATAATCCCCAAAACCGAGTGCAGAAGATCATTATTAGAAAATTGGAG 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tcagccacgaccttttcaactcaaagccccttgcaaaaattatttgctagaaaaatgaaa 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCTTAGGGACCACCCAGATCCTGTTTGGAATCATGAACTTTTCATTTGGAGTCATTTTC
                                                                                                                                                                                                                                                                                                                                                                                           This clone is available royalty-free through LLNL; contact the IMAGE Consortium (infolmage.llnl.gov) for further information. Possible reversed clone: similarity on wrong strand Insert Length: 733 Std Error: 0.00 Seq primer: -41ml3 fwd. ET from Amersham High quality sequence stop: 280.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tel:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA435988 382 bp mRNA spiens cDNA clone zu03a08.sl Soares_testis_NHT Homo sapiens cDNA clone 3' similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hillier, L., Allen, M., Bowles, L., Krizman, D., Kucaba, T., Lacy, M., I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     White,Y., Wylie,T., WaterstowashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA435988.1 GI:2140902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA435988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lenmon,G., Marra,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theimite,Y., Wylie,T., Waterston,R. and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 382)
                      135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       314 286 1800
314 286 1810
            /note="Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: ECO RI; 1st strand cDNA was prepared from mRNA obtained from Clontech Laboratories Inc., and primed with a Not I - oligo(dT) primer [5]
                                                                                                                                                                                                                                                                       /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                             /db_xref="taxon:9606"
/clone="IMAGE:730742"
                                                                                                                                                                                                                                      /lab_host="DH10B"
                                                                                                                                                                                                                                                           /sex="male"
                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="GDB:5927437"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANTIGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Marra, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Theising, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMAGE: 730742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jost,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Martin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , S . ,
```

Query Match
Best Local Similarity
Matches 113; Conserv

Conservative

25.1%; Score 113; DB 10; 100.0%; Pred. No. 1.5e-15; Live 0; Mismatches 0;

Length 382; Indels

0,;

Gaps

0

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
AA416972/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                 δõ
                                                                          Ş
                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                            338
                 398
                                                145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
tctcaattttggggtgccactcagaggattgtgattgtgaaccaatgttgttga
                                                              tgggaattttgattacattgatgactttcagcattattgaattattcatttctctgcctt 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tctcaattttggggtgccactcagaggattgtgattgtgaacaatgttgttga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tgggaattttgattacattgatgactttcagcattattgaattattcatttctctgcctt
                                              TGGGAATTTTGATTACATTGATGACTTTCAGCATTATTGAATTATTCATTTCTCTGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGAATTTTGATTACATTGATGACTTTCAGCATTATTGAATTATTCATTTCTCTGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTCAATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTTGTTGA
                                                                                                          113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA416972 387 bp mRNA EST 09-
zt94h05.sl Soares_testis_NHT Homo sapiens cDNA clone
ztsimilar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 White,Y., Wylie,T., Waterst
WashU-NCI human EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA416972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This clone is available royalty-free through LLNL; IMAGE Consortium (info@image.llnl.gov) for further i Insert Length: 656 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insert Length: 656 St. Seg primer: -41m13 fwd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA416972.1
                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 387)
                                                                                                                                                                                                   138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314 286 1800
314 286 1810
                                                                                                          Conservative
                                                                                                                                                                                           Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization to Cot5, and was constructed by Bento Soares and M. Fatima Bonaldo. "
77 c 67 g 105 t
                                                                                                                                                                                                                                                                                  /db_xref="taxon:9606"
/clone="IMAGE:730041"
/clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                              /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_xref="GDB:5926570"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                               /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:2077080
                                                                                                                      25.1%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Std Error:
                                                                                                        Score 113; DB; Pred. No. 1.5; 0; Mismatches
                                                                                                        0;
                                                                                                        ; DB 10;
. 1.5e-15;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Louis,
                                                                                                                                   Length
                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ANTIGEN CD20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-NOV-1997
                 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contact the
                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IMAGE: 730041
                                                                                                        Gaps
                                              86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            397
                                                                                                        0
 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                   RESULT 13
AA758635/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 1
AQ108532
LOCUS
                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                         DЪ
                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                           VERSION
                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                     Matches 113;
                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                              228
                                                                                                                                                                                                                             397
                                                                                                                                                                                                                                                           168
                                                                                                                                                                                                                                                                                       337
                                           sequence.
AA758635
AA758635.1
 Ното
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AQ108532
                               EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       end search page:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Map Building
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Venter, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AQ108532.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                            140
 sapiens
                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BAC ends
                                                                                                                                                                                                                                                                                                                                                                                                                          HindIII"
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85
                                                                                                                                                                 ttctcaattttggggtgccactcagaggattgtgaattgtgaacaatgttgttga_450
                                                                                                                                                                                                                                               CAGGGAATTTTGATTACATTGATGACTTTCAGCATTATTGAATTATTCATTTCTCTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTCAATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTTGTTGA
                                                                                                                                             TTCTCAATTTTGGGGTGCCACTCAGAGGATTGTGATTGTGAACAATGTTGTTGA
AA758635 394 bp mRNA EST 29-DEC-1998 ah67b04.sl Soares_testis_NHT Homo sapiens cDNA clone 1320655 3' similar to SW:CD20_HUMAN P11836 B-LYMPHOCYTE ANTIGEN CD20 ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The Institute for Genomic Research 9712 Medical Center Dr., Rockville, Tel: 301 838 0200 Fax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1998)
Other_GSSs: CIT-HSP-2379G7.TR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clones are available from Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AQ108532 538 bp DNA
CIT-HSP-2379G7.TF CIT-HSP Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Department of Eukaryotic Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Mark Adams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Use of a random human BAC End
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Berry, K., Granger, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Adams, M.D., Rounsley, S.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia; Eutheria;
1 (bases 1 to 538)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              primer: M13-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mdadams@tigr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="2379G7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1. .538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cell_type="Sperm"
/note="Vector: pBeloBAC11; Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="CIT-HSP"
                                                                                                                                                                                                                                                                                                                                                                                                                                 108 c
                                                                                                                                                                                                                                                                                                                             25.0%;
99.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                         Score 112.4;
Pred. No. 1.9
                                                                                                                                                                                                                                                                                                                                                                                                                               115 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S.D., Zhao,S., Bass,S., Linher,K., Golden,K., Suh,E., Wible,C., Shizuya,H., Simon,M. and
                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence Database
                                                                                                                                                                                                                                                                                                                               1.9e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetics (info@resgen.com). BAC
                                                                                                                                                                                                                                                                                                                                                DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MD 20850, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                genomic
                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HindIII; Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone 2379G7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                   538;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence-Ready
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostomi;
                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                              227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
```

0

```
RESULT 14
BE638321/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                    COMMENT
                                                                                                   REFERENCE
                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                  AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                  JOURNAL
                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                  309
                                                                                                                                                                                                                                                                                                                                                                                                                  394
                                                                                                                                                                                                                                                                                                                                                     334
                                                                                                                                                                                                                                                                                                                                                                                                                              249 tctttcaggatatccattctggggctctgttttgttcattaattctggagccttcctaat 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                              tgcagtgaaaagaaaaaccacagaaactctgggaattttgattacattgatgacttt 365
                                                                                                                                                                                                                                                                                                                                                                                                             TCTTTCAGGATATCCATTCTGGGGCTCTGTATGTATCATTAATTCTGGAGCCTTCCTAAT 335
                                                                                                                                                                                                               EST 28-AUG-2000 EST00013 mouse testis apoptosis subtraction cDNA library Mus musculus cDNA clone MTA13 5', mRNA sequence.
Contact: Jiang H
Department of Pharmacology
                                Unpublished (2000)
                                                                                                               Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                 Mus musculus
                                                                                                                                                                                                 BE638321.1 GI:9932064
                                                               Expressed sequence
                                                                                Jiang, H., Li, L. and
                                                                                                                                                                  house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 661 Std Error: 0.00
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 390.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 394)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Preparation: M. Bento Soares, Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Sequencing by: Washington University Genome Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA Library Arrayed by: Greg Lennon, Ph.
                                                                                               (bases 1 to 218)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="Soares_testis_NHT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone="1320655"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21.0%;
88.0%;
                                                               tags
                                                                                Lu,G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 94.6; DB Pred. No. 2e-11;
                                                                 from mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
                                                               testis apoptosis subtraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequencing Center information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                             Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fatima Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B86842
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             164 tcctgtttggaattatgaccttttcttttggagttatcttcctttttcaccttgttaaaac 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   104 ctcaaagccccttgcaaaaattatttgctagaaaaatgaaaatcttagggactatccaga 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198 CCCAAAACCGAGTGCAGAAGATCATTATTAGAAAATTGGAGATCTTAGGGACCACCCAGA 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             224 cat 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTGTTTGGAATCATGAACTTTTCATTTGGAGTCATTTTCCTTTTCACCTTGGTAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hunan Medical University
88 Xiangya road, Changsha,
Tel: 086-0731-4495636
Fax: 086-0731-4497661
Email: lj12@public.cs.hn.c
                                                                                                                     Department of Eukaryotic Genomics
The Institute for Genomic Researc
9712 Medical Center Dr., Rockvill
Clones are derived from the human BAC library RPCI-11. For BAC library availability, please contact bieter de Jong (pletter@dejong.med.buffalo.edu). Clones may be purchased from BACPAC Resources (http://bacpac.med.buffalo.edu/ordering) or fi
                                                                                                                                                                                                 Unpublished (1998)
Other_GSSs: RPCI11-26F10.TV
                                                                                                                                                                                                                                                                                                                                                                                                                                                           B86842 421 bp DNA GSS 09-APR-1999 RPCI11-26F10.TP RPCI-11 Homo sapiens genomic clone RPCI-11-26F10,
                                                                                                                                                                                  Contact: Mark Adams
                                                                                                                                                                                                                             Venter, J.C.
Use of BAC End Sequences for Sequence-Ready Map Building (1998)
                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                     Email: mdadams@tigr.org
                                                                                                                                                                                                                                                                   Golden, K., Berry, K., Granger, D.,
                                                                                                                                                                                                                                                                                    Adams, M.D.,
                                                                                                                                                                                                                                                                                                                                                                                                               B86842.1 GI:2927974
                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: ...
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                        (bases 1 to 421)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    il: 1j12@public.cs.hn.cn
primer: T7 Promoter Primer
primer: T8 promoter 218
                                                                                          301 838 0200
301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="testis"
/celi_type="spermatogenesis cells"
/dev_stage="adult"
/lab_host="JM109"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Vector:
39 c 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="mouse testis apoptosis subtraction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:10090"
/clone="MTA13"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /strain="C57BL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ibrary"
                                                                                                                                                                                                                                                                                                                                         Metazoa;
                                                                                                                                                                                                                                                                                      Rounsley,S.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18.4%;
79.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Changsha, Hunan 410078, China
                                                                                                                                                                                                                                                                                                                         Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 83; DB 10;
Pred. No. 8.7e-09;
D; Mismatches 25
                                                                                                                           c Research
Rockville,
                                                                                                                                                                                                                                                                                      Zhao, S.,
                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            72
                                                                                                                                                                                                                                                                   Suh, E., Wible, C., de Jong, P. and
                                                                                                                             MD 20850,
                                                                                                                                                                                                                                                                                      Field, C.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                             USA
                                                                                                                                                                                                                                                                                      Bass, S., Linher, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
 or from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
В
                                                                                                                           δã
                                                                                                                                                                   B
Search completed: November 29, 2001, 00:18:42 Job time: 9879 sec
                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
Source
                                                                                                                                                                                                                                      Query Match 15.7%; Score 70.6; DB 13; Length 421; Best Local Similarity 94.8%; Pred. No. 4.6e-06; Matches 73; Conservative 0; Mismatches 4; Indels 0;
                                                                                                                                                               405 TTCACTTTGTTAAAACC 421
                                                                                                           208 ttcaccttgttaaaacc 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html Seq primer: SP6 Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                        124 a
                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/ob_xref="GDB:7509729"
/db_xref="GDB:7509729"
/db_xref="Laxon:9606"
/clone="RFCI-11-26F10"
/clone_lib="RPCI-11"
/sex="Male"
/sex="Male"
/cell_type="Lymphocytes"
/note="Vector: pBACe3.6; Site_1: ECORI; Site_2: ECORI;
RPCII1 Human Male BAC Library"
a 95 c 71 g 131 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1. .421
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                          0;
```

THIS PAGE BLANK (USPTO)